

# **Arizona**

## **Arizona's Instrument To Measure Standards**

### **2007**

### **Technical Report**

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## Foreword

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The technical information herein is intended for use by those who evaluate tests, interpret scores, or use test results in making educational decisions. It is assumed that the reader has technical knowledge of test construction and measurement procedures, as stated in *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

## Table of Contents

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<b>FOREWORD .....</b>	<b>III</b>
<b>TABLE OF CONTENTS .....</b>	<b>IV</b>
<b>FIGURES AND TABLES .....</b>	<b>VI</b>
<b>PART 1: OVERVIEW .....</b>	<b>1</b>
<b>PART 2: INVOLVEMENT OF ARIZONA EDUCATORS AT ALL LEVELS .....</b>	<b>2</b>
<b>PART 3: TEST DESIGN .....</b>	<b>3</b>
3.1    CONTENT STANDARDS .....	3
3.2    TEST BLUEPRINTS .....	5
3.3    DESCRIPTION OF AIMS 2007 TESTS .....	6
3.3.1 <i>High School Reading (Criterion-referenced only)</i> .....	6
3.3.2 <i>High School Writing (Criterion-referenced only)</i> .....	6
3.3.3 <i>High School Mathematics (Criterion-referenced only)</i> .....	6
3.3.4 <i>Grades 3-8 Reading and Language (Dual Purpose Assessment)</i> .....	7
3.3.5 <i>Grades 3-8 Writing</i> .....	7
3.3.6 <i>Grades 3-8 Mathematics (Dual Purpose Assessment)</i> .....	8
3.3.7 <i>Language Arts Composite</i> .....	8
<b>PART 4: TEST DEVELOPMENT.....</b>	<b>14</b>
4.1    AIMS TEST DEVELOPMENT AND EDITING PROCESS .....	14
4.1.1 <i>Test Development Process</i> .....	14
4.1.2 <i>Documents and Materials Development</i> .....	14
4.1.3 <i>Item Development and Editing</i> .....	14
4.1.4 <i>Quality Reviews</i> .....	15
4.2    POOL OF ITEMS USED FOR TEST CONSTRUCTION .....	15
4.2.1 <i>Item Specifications</i> .....	15
4.2.2 <i>Passage Development and Review</i> .....	16
4.2.3 <i>Item Writing</i> .....	18
4.2.4 <i>Content/Sensitivity Review</i> .....	19
4.2.5 <i>AIMS CRT Item Selection</i> .....	22
4.2.6 <i>AIMS NRT Item Selection</i> .....	26
4.2.7 <i>Data Analysis Committee</i> .....	27
4.3    CUSTOMER APPROVALS .....	27
4.3.1 <i>Item Selection Approval</i> .....	27
4.3.2 <i>Second Pages Approvals</i> .....	27
4.3.3 <i>FTP Site</i> .....	28
4.3.4 <i>Materials Integration Review (MIR)</i> .....	28
4.3.5 <i>Quality Assurance (QA) Review (CTB)</i> .....	28
4.3.6 <i>ADE Quality Review</i> .....	28
4.3.7 <i>Final Sign-off</i> .....	28
<b>PART 5: TEST ADMINISTRATION.....</b>	<b>29</b>
5.1    ACCOMMODATIONS.....	29
5.1.1 <i>Overview of Accommodations</i> .....	29
5.1.2 <i>Descriptions of Universal, Standard, and Alternate Accommodations</i> .....	30
5.1.3 <i>Determining if a Student Needs a Testing Accommodation</i> .....	30
5.1.4 <i>Reporting Results of Assessments Taken with Accommodations</i> .....	33
5.2    TEST SECURITY .....	33
5.3    TEST ADMINISTRATION .....	33

<b>PART 6: DATA FOR OPERATIONAL ANALYSIS.....</b>	<b>36</b>
6.1    DATA.....	36
6.2    ENSURING VALID RECORDS IN CALIBRATION SAMPLE .....	36
6.3    DESCRIPTIVE STATISTICS BY TEST .....	37
6.4    CLASSICAL ITEM ANALYSIS .....	39
<b>PART 7: CALIBRATION, SCALING AND EQUATING .....</b>	<b>89</b>
7.1    CALIBRATION METHODS .....	89
7.1.1 <i>Calibration Models</i> .....	89
7.1.2 <i>Calibration Software</i> .....	90
7.2    CALIBRATION RESULTS.....	90
7.2.1 <i>IRT Item Statistics</i> .....	90
7.3    SCALING METHODS.....	106
7.3.1 <i>Long-term Plan for Identifying/Correcting Drift</i> .....	106
7.4    ANNUAL EQUATING .....	106
7.4.1 <i>Reading and Mathematics</i> .....	106
7.4.2 <i>Writing</i> .....	112
7.4.3 <i>Scoring and Standard Error of Measurement</i> .....	112
<b>PART 8: TEST RESULTS.....</b>	<b>142</b>
8.1    DATA.....	142
8.1.1 <i>AIMS CRT State Test Results</i> .....	142
8.1.2 <i>AIMS DPA NRT State Results</i> .....	183
8.2    LONGITUDINAL DATA .....	185
<b>PART 9: VALIDITY EVIDENCE .....</b>	<b>192</b>
9.1    RELIABILITY.....	192
9.1.1 <i>Measures of Internal Consistency</i> .....	192
9.1.2 <i>Reliability of Constructed-Response Scoring</i> .....	193
9.2    VALIDITY .....	196
9.2.1 <i>Differential Item Functioning</i> .....	196
9.2.2 <i>Correlations among AIMS Assessments</i> .....	235
<b>PART 10: CLASSIFICATION.....</b>	<b>239</b>
10.1    STANDARD SETTING TECHNICAL DOCUMENTATION .....	239
10.2    CLASSIFICATION CONSISTENCY AND ACCURACY .....	240
10.2.1 <i>Classification Consistency</i> .....	241
10.2.2 <i>Classification Accuracy</i> .....	242
10.2.3 <i>Classification Consistency and Accuracy Results</i> .....	243
<b>REFERENCES .....</b>	<b>246</b>
<b>APPENDIX A FALL 2006 AIMS ADMINISTRATION.....</b>	<b>248</b>
<b>APPENDIX B ITEM WRITER SELECTION CRITERIA.....</b>	<b>256</b>
<b>APPENDIX C ITEM WRITING WORKSHOP.....</b>	<b>258</b>
<b>APPENDIX D WRITING PRE-EQUATING STUDY .....</b>	<b>271</b>

## Figures and Tables

---

FIGURE 3.1.1 ARIZONA READING CONCEPTS AND STRANDS .....	3
FIGURE 3.1.2 ARIZONA MATHEMATICS CONCEPTS AND STRANDS .....	4
FIGURE 3.1.3 ARIZONA WRITING TRAITS .....	4
TABLE 3.2.1 AIMS BLUEPRINT FOR READING .....	5
TABLE 3.2.2 AIMS BLUEPRINT FOR MATHEMATICS .....	6
TABLE 3.3.1 SPRING 2007 AIMS TEST STRUCTURE READING AND LANGUAGE .....	9
TABLE 3.3.2 SPRING 2007 AIMS TEST STRUCTURE MATH .....	9
TABLE 3.3.3 <i>TERRANOVA</i> AND AIMS NRT BLUEPRINT REPRESENTATION READING .....	10
TABLE 3.3.4 <i>TERRANOVA</i> AND AIMS NRT BLUEPRINT REPRESENTATION LANGUAGE .....	11
TABLE 3.3.5 <i>TERRANOVA</i> AND AIMS NRT BLUEPRINT REPRESENTATION MATHEMATICS .....	12
TABLE 3.3.6 RAW SCORE AND SCALE SCORE RANGES OF AIMS 2007 CRT ASSESSMENTS .....	13
TABLE 4.2.2.1 TYPES OF PASSAGES COMMISSIONED .....	16
TABLE 4.2.2.2 NUMBER OF PASSAGES REVIEWED AND ACCEPTED .....	18
TABLE 4.2.3 ITEM WRITING PLAN .....	19
TABLE 4.2.4.1 CONTENT AND SENSITIVITY REVIEW RESULTS .....	21
TABLE 4.2.4.2 NUMBER OF FIELD TEST ITEMS SELECTED .....	22
TABLE 4.2.5.1 SAMPLE GRADE 3 MATHEMATICS ITEM POOL TABLE .....	24
TABLE 4.2.5.2 SAMPLE GRADE 3 MATHEMATICS ITEM REPLACEMENT TABLE .....	25
TABLE 4.2.5.3 NUMBER OF ITEMS SELECTED BY COMMITTEE .....	26
TABLE 4.2.7.1 AIMS ITEMS GIVEN SPECIAL CODES .....	27
TABLE 5.1.1 2006 FALL AND 2007 SPRING AIMS STANDARD ACCOMMODATIONS .....	32
TABLE 5.1.2 FALL 2006 AND SPRING 2007 AIMS ALTERNATE ACCOMMODATIONS .....	32
FIGURE 5.2.1 2007 SPRING AIMS TEST SECURITY AGREEMENT .....	35
TABLE 6.3.1 2007 SPRING AIMS CLASSICAL TEST ANALYSIS STATISTICS .....	38
TABLE 6.4.1 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 3 .....	40
TABLE 6.4.2 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 4 .....	42
TABLE 6.4.3 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 5 .....	44
TABLE 6.4.4 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 6 .....	46
TABLE 6.4.5 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 7 .....	48
TABLE 6.4.6 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT GRADE 8 .....	50
TABLE 6.4.7 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS CRT HIGH SCHOOL .....	52
TABLE 6.4.8 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 3 .....	54
TABLE 6.4.9 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 4 .....	56
TABLE 6.4.10 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 5 .....	58
TABLE 6.4.11 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 6 .....	60
TABLE 6.4.12 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 7 .....	62
TABLE 6.4.13 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT GRADE 8 .....	64
TABLE 6.4.14 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING CRT HIGH SCHOOL .....	66
TABLE 6.4.15 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 3 .....	68
TABLE 6.4.16 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 4 .....	68
TABLE 6.4.17 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 5 .....	68
TABLE 6.4.18 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 6 .....	69
TABLE 6.4.19 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 7 .....	69
TABLE 6.4.20 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT GRADE 8 .....	69
TABLE 6.4.21 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT HIGH SCHOOL PROMPT A .....	70
TABLE 6.4.22 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS WRITING CRT HIGH SCHOOL PROMPT T .....	70
TABLE 6.4.23 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 3 .....	71
TABLE 6.4.24 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 4 .....	72
TABLE 6.4.25 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 5 .....	73
TABLE 6.4.26 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 6 .....	74
TABLE 6.4.27 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 7 .....	75
TABLE 6.4.28 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS MATHEMATICS NRT GRADE 8 .....	76

TABLE 6.4.29 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 3.....	77
TABLE 6.4.30 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 4.....	78
TABLE 6.4.31 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 5.....	79
TABLE 6.4.32 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 6.....	80
TABLE 6.4.33 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 7.....	81
TABLE 6.4.34 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS READING NRT GRADE 8.....	82
TABLE 6.4.35 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 3 .....	83
TABLE 6.4.36 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 4 .....	84
TABLE 6.4.37 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 5 .....	85
TABLE 6.4.38 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 6 .....	86
TABLE 6.4.39 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 7 .....	87
TABLE 6.4.40 2007 SPRING AIMS CLASSICAL ITEM ANALYSIS LANGUAGE NRT GRADE 8 .....	88
TABLE 7.2.1.1 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 3 .....	92
TABLE 7.2.1.2 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 4 .....	93
TABLE 7.2.1.3 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 5 .....	94
TABLE 7.2.1.4 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 6 .....	95
TABLE 7.2.1.5 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 7 .....	96
TABLE 7.2.1.6 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS GRADE 8 .....	97
TABLE 7.2.1.7 2007 SPRING AIMS IRT ITEM STATISTICS MATHEMATICS HIGH SCHOOL.....	98
TABLE 7.2.1.8 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 3 .....	99
TABLE 7.2.1.9 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 4 .....	100
TABLE 7.2.1.10 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 5 .....	101
TABLE 7.2.1.11 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 6 .....	102
TABLE 7.2.1.12 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 7 .....	103
TABLE 7.2.1.13 2007 SPRING AIMS IRT ITEM STATISTICS READING GRADE 8 .....	104
TABLE 7.2.1.14 2007 SPRING AIMS IRT ITEM STATISTICS READING HIGH SCHOOL.....	105
TABLE 7.4.1.1 SPRING 2007 AIMS ANCHOR ITEMS .....	107
TABLE 7.4.1.2 REPRESENTATION OF CONTENT BY 2007 ANCHOR SETS, MATHEMATICS .....	108
TABLE 7.4.1.3 REPRESENTATION OF CONTENT BY 2007 ANCHOR SETS, READING.....	109
TABLE 7.4.1.4 REPRESENTATION OF DIFFICULTY BY 2007 ANCHOR SETS, MATHEMATICS.....	110
TABLE 7.4.1.5 REPRESENTATION OF DIFFICULTY BY 2007 ANCHOR SETS, READING .....	111
TABLE 7.4.3.1 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 3 .....	114
TABLE 7.4.3.2 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 4 .....	115
TABLE 7.4.3.3 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 5 .....	116
TABLE 7.4.3.4 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 6 .....	117
TABLE 7.4.3.5 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 7 .....	118
TABLE 7.4.3.6 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT GRADE 8 .....	119
TABLE 7.4.3.7 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT HIGH SCHOOL.....	120
TABLE 7.4.3.8 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 3 .....	121
TABLE 7.4.3.9 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 4 .....	122
TABLE 7.4.3.10 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 5 .....	123
TABLE 7.4.3.11 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 6 .....	124
TABLE 7.4.3.12 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 7 .....	125
TABLE 7.4.3.13 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT GRADE 8 .....	126
TABLE 7.4.3.14 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT HIGH SCHOOL.....	127
TABLE 7.4.3.15 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 3 .....	128
TABLE 7.4.3.16 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 4 .....	129
TABLE 7.4.3.17 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 5 .....	130
TABLE 7.4.3.18 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 6 .....	131
TABLE 7.4.3.19 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 7 .....	132
TABLE 7.4.3.20 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT GRADE 8 .....	133
TABLE 7.4.3.21 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT HIGH SCHOOL PROMPT A .....	134
TABLE 7.4.3.22 2007 SPRING AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT HIGH SCHOOL PROMPT T .....	135
TABLE 7.4.3.23 2007 SPRING AIMS NRT SEM TABLE GRADE 3 .....	136
TABLE 7.4.3.24 2007 SPRING AIMS NRT SEM TABLE GRADE 4 .....	137
TABLE 7.4.3.25 2007 SPRING AIMS NRT SEM TABLE GRADE 5 .....	138

TABLE 7.4.3.26 2007 SPRING AIMS NRT SEM TABLE GRADE 6 .....	139
TABLE 7.4.3.27 2007 SPRING AIMS NRT SEM TABLE GRADE 7 .....	140
TABLE 7.4.3.28 2007 SPRING AIMS NRT SEM TABLE GRADE 8 .....	141
TABLE 8.1.1.1 2007 SPRING AIMS LOSS AND HOSS TABLE .....	143
TABLE 8.1.1.2 2007 SPRING AIMS STATE TEST RESULTS MATHEMATICS CRT GRADES 3-8 .....	144
TABLE 8.1.1.3 2007 SPRING AIMS STATE TEST RESULTS MATHEMATICS CRT HIGH SCHOOL .....	146
TABLE 8.1.1.4 2007 SPRING AIMS STATE TEST RESULTS READING CRT GRADES 3-8 .....	147
TABLE 8.1.1.5 2007 SPRING AIMS STATE TEST RESULTS READING CRT HIGH SCHOOL .....	149
TABLE 8.1.1.6 2007 SPRING AIMS STATE TEST RESULTS WRITING CRT GRADES 3-8.....	150
TABLE 8.1.1.7 2007 SPRING AIMS STATE TEST RESULTS WRITING CRT HIGH SCHOOL .....	152
TABLE 8.1.1.8 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 3 .....	153
TABLE 8.1.1.9 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 4 .....	154
TABLE 8.1.1.10 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 5 .....	155
TABLE 8.1.1.11 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 6 .....	156
TABLE 8.1.1.12 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 7 .....	157
TABLE 8.1.1.13 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT GRADE 8 .....	158
TABLE 8.1.1.14 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT HIGH SCHOOL COHORT 09 .....	159
TABLE 8.1.1.15 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT HIGH SCHOOL COHORT 08 .....	160
TABLE 8.1.1.16 2007 SPRING AIMS FREQUENCY DISTRIBUTION MATHEMATICS CRT HIGH SCHOOL COHORT 07 .....	161
TABLE 8.1.1.17 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 3.....	162
TABLE 8.1.1.18 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 4.....	163
TABLE 8.1.1.19 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 5.....	164
TABLE 8.1.1.20 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 6.....	165
TABLE 8.1.1.21 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 7.....	166
TABLE 8.1.1.22 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT GRADE 8.....	167
TABLE 8.1.1.23 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT HIGH SCHOOL COHORT 09 .....	168
TABLE 8.1.1.24 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT HIGH SCHOOL COHORT 08 .....	169
TABLE 8.1.1.25 2007 SPRING AIMS FREQUENCY DISTRIBUTION READING CRT HIGH SCHOOL COHORT 07 .....	170
TABLE 8.1.1.26 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 3 .....	171
TABLE 8.1.1.27 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 4 .....	172
TABLE 8.1.1.28 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 5 .....	173
TABLE 8.1.1.29 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 6 .....	174
TABLE 8.1.1.30 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 7 .....	175
TABLE 8.1.1.31 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT GRADE 8 .....	176
TABLE 8.1.1.32 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 09 PROMPT A ..	177
TABLE 8.1.1.33 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 09 PROMPT T ..	178
TABLE 8.1.1.34 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 08 PROMPT A ..	179
TABLE 8.1.1.35 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 08 PROMPT T ..	180
TABLE 8.1.1.36 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 07 PROMPT A ..	181
TABLE 8.1.1.37 2007 SPRING AIMS FREQUENCY DISTRIBUTION WRITING CRT HIGH SCHOOL COHORT 07 PROMPT T ..	182
TABLE 8.1.2.1 2007 SPRING AIMS NRT STATE TEST RESULTS .....	184
TABLE 8.2.1 LONGITUDINAL COMPARISON OF SCALE SCORES MATHEMATICS CRT .....	186
TABLE 8.2.2 LONGITUDINAL COMPARISON OF PERFORMANCE LEVEL DISTRIBUTION MATHEMATICS CRT .....	187
TABLE 8.2.3 LONGITUDINAL COMPARISON OF SCALE SCORES READING CRT .....	188
TABLE 8.2.4 LONGITUDINAL COMPARISON OF PERFORMANCE LEVEL DISTRIBUTION READING CRT .....	189
TABLE 8.2.5 LONGITUDINAL COMPARISON OF SCALE SCORES WRITING CRT .....	190
TABLE 8.2.6 LONGITUDINAL COMPARISON OF PERFORMANCE LEVEL DISTRIBUTION WRITING CRT .....	191
TABLE 9.1.1.1 2007 SPRING AIMS INTERNAL CONSISTENCY .....	193
TABLE 9.1.2.1 2007 SPRING AIMS INTER-RATER POSITION CONSISTENCY GRADES 3-8 .....	195
TABLE 9.1.2.2 2007 SPRING AIMS INTER-RATER POSITION CONSISTENCY HIGH SCHOOL .....	196
TABLE 9.2.1.1 DIFFERENTIAL ITEM FUNCTIONING FLAG CATEGORIES .....	198
TABLE 9.2.1.2 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 3 .....	199
TABLE 9.2.1.3 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 4 .....	202
TABLE 9.2.1.4 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 5 .....	205
TABLE 9.2.1.5 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 6 .....	208
TABLE 9.2.1.6 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 7 .....	211

TABLE 9.2.1.7 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT GRADE 8.....	214
TABLE 9.2.1.8 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING MATHEMATICS CRT HIGH SCHOOL.....	217
TABLE 9.2.1.9 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 3 .....	220
TABLE 9.2.1.10 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 4.....	222
TABLE 9.2.1.11 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 5.....	224
TABLE 9.2.1.12 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 6.....	226
TABLE 9.2.1.13 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 7.....	228
TABLE 9.2.1.14 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT GRADE 8.....	230
TABLE 9.2.1.15 2007 SPRING AIMS DIFFERENTIAL ITEM FUNCTIONING READING CRT HIGH SCHOOL.....	232
TABLE 9.2.1.16 DIF STATISTICS FOR ITEMS EXHIBITING STRONG DIF .....	234
TABLE 9.2.3.1 MATCHING PROCESS FOR HIGH SCHOOL TEST CORRELATIONS CALCULATIONS.....	235
TABLE 9.2.3.2 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 3 .....	236
TABLE 9.2.3.3 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 4 .....	236
TABLE 9.2.3.4 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 5 .....	236
TABLE 9.2.3.5 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 6 .....	237
TABLE 9.2.3.6 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 7 .....	237
TABLE 9.2.3.7 2007 SPRING AIMS CORRELATIONS AMONG TESTS GRADE 8 .....	237
TABLE 9.2.3.8 2007 SPRING AIMS CORRELATIONS AMONG TESTS HIGH SCHOOL .....	238
TABLE 10.1.1 2007 SPRING AIMS FINAL SCALE SCORE RANGES BY PERFORMANCE LEVEL.....	240
TABLE 10.2.3.1 2007 SPRING AIMS STANDARD ERROR OF MEASUREMENT AT CUT SCORES.....	244
TABLE 10.2.3.2 2007 SPRING AIMS READING AND MATHEMATICS CLASSIFICATION CONSISTENCY AND ACCURACY.....	245
TABLE A.1 2006 FALL AIMS RAW SCORE TO SCALE SCORE TABLE MATHEMATICS CRT HIGH SCHOOL .....	250
TABLE A.2 2006 FALL AIMS RAW SCORE TO SCALE SCORE TABLE READING CRT HIGH SCHOOL .....	251
TABLE A.3 2006 FALL AIMS RAW SCORE TO SCALE SCORE TABLE WRITING CRT HIGH SCHOOL .....	252
TABLE A.4 2006 FALL AIMS RESULTS MATHEMATICS CRT HIGH SCHOOL .....	253
TABLE A.5 2006 FALL AIMS RESULTS READING CRT HIGH SCHOOL.....	254
TABLE A.6 2007 FALL AIMS RESULTS WRITING CRT HIGH SCHOOL.....	255

## Part 1: Overview

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This document provides information regarding processes and procedures implemented in the 2006 Fall and 2007 Spring Arizona Instrument to Measure Standards (AIMS) assessments for the development of tests, analysis of data, calibration, scoring, and scaling. This document also describes the results of the 2006 Fall and 2007 Spring AIMS assessments. The technical information in this report is intended for those who evaluate tests, interpret scores, or use test results in making educational decisions.

This document also provides information relevant to the *Standards for Educational and Psychological Testing* (American Education Research Association, American Psychological Association, National Council on Measurement in Education, 1999). Each part of this technical report addresses different standards. The standards addressed by each part are listed at the beginning of each part. Part 1 of the technical report addresses standards 2.7, 3.2, 3.3, 6.3, 6.4, 6.15, and 13.6.

The 2006 Fall AIMS assessments were administered in reading, writing, and mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score in at least one of the content areas. The 2007 Spring AIMS assessments were administered in reading, writing and mathematics to students in Grades 3-8 and high school. This was the third year that Grades 3-8 and high school were administered all content areas of the AIMS. Students in grades 3, 5, and 8 have been taking AIMS assessments since the 1999-2000 school year, and students in high school began taking AIMS (Form A) in reading, writing, and mathematics in 1999. The AIMS assessments are designed to measure Arizona students' performance on the Arizona content standards. All AIMS reading and mathematics tests are written to Arizona content standards adopted in March 2003. The AIMS writing tests are written to content standards adopted in June 2004.

The AIMS high school reading, writing, and mathematics tests are criterion-referenced competency tests. Students' test scores on the AIM high school tests are one component of the high school graduation requirements and that passing scores are required to earn a diploma for students who graduated beginning in Spring 2006. Students in grade 10 have five opportunities to pass the test prior to graduation. The AIMS high school tests in reading and mathematics consist of multiple-choice items. The AIMS high school test in writing consists of a single prompt essay which is scored using a six-trait analytic rubric.

The AIMS reading/language and mathematics tests for Grades 3-8 are dual purpose assessments (DPA)—both criterion and norm-referenced scores are given based on performance on the tests. The AIMS writing tests are single prompt essay tests scored using a six-trait analytic rubric. Criterion-referenced scores are reported in reading, writing, and mathematics. Norm-reference scores are reported in reading, language, and mathematics. Each reading and mathematics test consists of items written by Arizona teachers and items from CTB/McGraw-Hill's norm-referenced test, *TerraNova, The Second Edition®* (*TerraNova*; CTB/McGraw-Hill, 2001). Some of the *TerraNova* items contribute to both criterion-referenced and norm-referenced scores. This design eliminated the need for students to take two separate tests and was first implemented for the 2004-2005 testing period. All reading, language, and mathematics tests consist of multiple-choice items only.

In addition to the scores for reading, writing, and mathematics, a composite score for language arts is also reported. The language arts composite is the mathematical average of the reading and writing scale scores. Given the language arts composite is based on separately scaled assessments, reliability information is provided separately for reading and writing.

## **Part 2: Involvement of Arizona Educators at all Levels**

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Part 2 of the technical report addresses the involvement of Arizona educators in test development. This part of the technical report addresses standard 3.5 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

Several committees met throughout the year in preparation for the 2006-2007 AIMS assessments. These committees included teachers, curriculum specialists, and administrators from across the state and were an integral part of the AIMS test development processes and AIMS results interpretation.

The test development committee meetings included:

- Data Analysis, in which educators examined the item data generated during the Spring 2006 field test and assigned each item a status code to be included with the item information in the item bank and that would determine its eligibility for possible selection as an operational item starting in Spring 2007;
- Passage Review, conducted in Spring 2006, in which educators reviewed passages to ensure topics were appropriate and would not favor a particular gender or ethnic group;
- Item Writing, conducted in Spring 2006, in which educators wrote items aligned to the content standards for possible inclusion in the Spring 2007 tests as field test items;
- Content and Bias/Sensitivity Review, in which educators reviewed items to ensure content was appropriate to the standards being assessed and that the items would not favor a particular gender or ethnic group; and
- Item Selection, in which educators chose items from the Item Bank and pool of field tested items administered in the Spring of 2006 to be included on the 2006-2007 assessments.

More information regarding the committee meetings is provided in sections 4 of this report. During all committee meetings testing materials were kept secure and committee members signed non-disclosure agreements.

The Anchor Setting Committees for the 2007 AIMS Writing Assessment included:

- Anchor Setting, which was held in July 2006. The Anchor Setting Committee established anchor, training, and qualification papers used in scoring the 2007 operational prompts for both AIMS HS (spring and fall) and AIMS DPA. Twenty-four Arizona educators used the Six Trait Rubric to select anchor sets from the 2003 field test responses. Range-finding teams consisted of three teachers and one CTB facilitator. Each team established scores and annotations for anchor sets and ancillary papers for all six traits in each grade span. Anchor sets included up to three papers in each score point for each trait for a total of 16 - 18 papers in each prompt. Papers scored but not put into anchor sets were used for training and qualification of evaluators;
- Anchor Review, which was held in September 2006 following the completion of range-finding. The ADE and CTB staffs met with additional educators and facilitators to align the anchor papers for each prompt vertically and horizontally.

## **Part 3: Test Design**

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Part 3 of the technical report provides information regarding test design. The following AERA/APA/NCME standards are addressed: 1.2, 1.6, 3.1, 3.2, 3.3, 3.11, 6.4, 6.15, 13.3, and 13.5.

### **3.1 Content Standards**

The AIMS assessments are designed to measure performance on the Arizona content standards adopted in March 2003 for reading and mathematics and in June 2004 for writing. These standards are organized by strand, concept, and performance objective. The AIMS reading and mathematics test blueprints are based on the concepts and strands of the Arizona content standards, presented in figures 3.1.1-3.1.2. The AIMS writing tests are scored on the Six Trait Writing Rubric. Figure 3.1.3 presents the six traits.

#### **Figure 3.1.1 Arizona Reading Concepts and Strands**

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##### **Strand 1: Reading Process**

**Concept 1: Print Concepts**

**Concept 3: Phonics**

**Concept 4: Vocabulary**

**Concept 6: Comprehension Strategies**

##### **Strand 2: Comprehending Literary Text**

**Concept 1: Elements of Literature**

**Concept 2: Historical and Cultural Aspects**

##### **Strand 3: Comprehending Informational Text**

**Concept 1: Expository Text**

**Concept 2: Functional Text**

**Concept 3: Persuasive Text**

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**Figure 3.1.2**  
**Arizona Mathematics Concepts and Strands**

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**Strand 1: Number Sense and Operations**

**Concept 1: Number Sense**

**Concept 2: Numerical Operations**

**Concept 3: Estimation**

**Strand 2: Data Analysis, Probability and Discrete Math**

**Concept 1: Data Analysis (Statistics)**

**Concept 2: Probability**

**Concept 3 and 4: Discrete Mathematics**

**Strand 3: Patterns, Algebra and Functions**

**Concept 1: Patterns**

**Concept 2: Functions and Relationships**

**Concept 3: Algebraic Representations**

**Concept 4: Analysis of Change**

**Strand 4: Geometry and Measurement**

**Concept 1: Geometric Properties**

**Concept 2: Transformation of Shapes**

**Concept 3: Coordinate Geometry**

**Concept 4: Measurement**

**Strand 5: Structure and Logic**

**Concept 1: Algorithms and Algorithmic Thinking**

**Concept 2: Logic and Reasoning**

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**Figure 3.1.3**  
**Arizona Writing Traits**

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**Trait 1: Ideas and Content**

**Trait 2: Organization**

**Trait 3: Voice**

**Trait 4: Word Choice**

**Trait 5: Sentence Fluency**

**Trait 6: Conventions**

---

### 3.2 Test Blueprints

A test blueprint designates the percentage of items that should measure each strand and concept. All AIMS assessments were designed in accordance with the following blueprints. Further discussion of item selection to match the blueprints is included in Part 4 of this report.

**Table 3.2.1**  
**AIMS blueprint for Reading**

Spring 2004-2005 AIMS Reading Blueprint													
Grade	Strand	Strand 1				Strand 2				Strand 3			
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 7	Concept 8	Concept 1	Concept 2	Concept 3	Concept 4
Grade 3	% of test	7%	0%	5%	11%	0%	17%	22%	0%	11%	11%	11%	
		44%				22%				33%			
Grade 4	% of test	Strand 1				Strand 2				Strand 3			
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 7	Concept 8	Concept 1	Concept 2	Concept 3	Concept 4
Grade 5	% of test	0%	0%	0%	7%	0%	15%	31%	0%	24%	11%	11%	
		22%				31%				48%			
Grade 6	% of test	Strand 1				Strand 2				Strand 3			
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 7	Concept 8	Concept 1	Concept 2	Concept 3	Concept 4
Grade 7	% of test	0%	0%	0%	11%	0%	11%	31%	0%	24%	11%	11%	
		22%				31%				48%			
Grade 8	% of test	Strand 1				Strand 2				Strand 3			
		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Concept 6	Concept 7	Concept 8	Concept 1	Concept 2	Concept 3	Concept 4
Grade HS	% of test	0%	0%	0%	7%	0%	9%	26%	7%	24%	15%	11%	
		17%				33%				60%			

January 2005

Source: [www.azed.gov/standards/aims/blueprints/Reading1-10-06.pdf](http://www.azed.gov/standards/aims/blueprints/Reading1-10-06.pdf)

**Table 3.2.2**  
**AIMS blueprint for Mathematics**

Spring 2004-2005 AIMS Mathematics Blueprint																		
	Strand 1			Strand 2				Strand 3				Strand 4				Strand 5		
	C1	C2	C3	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	
Grade 3	15%	14%	6%	6%	6%	6%	6%	11%	11%	8%	13%	6%						
% of Test by Concept																		
% of Test by Strand	35%			17%				22%				21%				6%		
Grade 4	13%	11%	6%	6%	6%	6%	6%	12%	12%	10%	15%	6%						
% of Test by Concept																		
% of Test by Strand	30%			17%				23%				24%				6%		
Grade 5	10%	13%	6%	6%	6%	6%	6%	12%	12%	10%	13%	6%						
% of Test by Concept																		
% of Test by Strand	29%			18%				24%				24%				6%		
Grade 6	6%	10%	6%	6%	6%	6%	9%	12%	12%	12%	16%	6%						
% of Test by Concept																		
% of Test by Strand	22%			21%				24%				28%				6%		
Grade 7	7%	9%	6%	9%	6%	6%	6%	12%	12%	13%	14%	6%						
% of Test by Concept																		
% of Test by Strand	22%			21%				24%				28%				6%		
Grade 8	6%	6%	6%	11%	6%	6%	6%	6%	6%	6%	6%	6%						
% of Test by Concept																		
% of Test by Strand	18%			23%				27%				26%				6%		
H. S.	5%	5%	5%	9%	5%	5%	5%	5%	7%	14%	5%	9%	5%	7%	6%	5%	5%	
% of Test by Concept																		
% of Test by Strand	14%			19%				31%				27%				9%		

Source: [www.azed.gov/standards/aims/blueprints/Mathematics1-10-06.pdf](http://www.azed.gov/standards/aims/blueprints/Mathematics1-10-06.pdf)

### 3.3 Description of AIMS 2007 Tests

The test blueprints were used with the processes described in detail in Part 4 to develop all AIMS tests administered in 2007. The resulting test configurations are as follows.

#### 3.3.1 High School Reading (Criterion-referenced only)

The AIMS CRT high school reading test consisted of 54 multiple-choice items developed by Arizona teachers. The raw scores ranged from 0-54 and scale scores were designed to range from 500 to 900. All items on the high school reading test reported to a criterion-referenced score. No norm-referenced items were included on the high school reading test.

#### 3.3.2 High School Writing (Criterion-referenced only)

The AIMS CRT high school writing test consisted of one extended response writing prompt. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. Final scores for traits with discrepant ratings were resolved by a third rater. The raw scores ranged from 0-36 and scale scores were designed to range from 500-900. There were two forms of the high school writing test, A and T. Form T was used as a make-up form administered two weeks after the operational window. No norm-referenced items were included on the high school writing tests.

#### 3.3.3 High School Mathematics (Criterion-referenced only)

The AIMS CRT high school mathematics test originally consisted of 85 multiple-choice items developed by Arizona teachers. However, one item was dropped from the regular version and two

items were dropped from the Braille version due to content considerations after test books were printed. Student test scores and all reports excluded the dropped items. The raw scores ranged from 0-84 (0-83 for Braille) and scale scores were designed to range from 500 to 900. All items on the high school mathematics test reported to a criterion-referenced score. No norm-referenced items were included in the high school mathematics test.

### **3.3.4 Grades 3-8 Reading and Language (Dual Purpose Assessment)**

The AIMS reading tests for grades 3-8 consisted of both a criterion-referenced and a norm-referenced component. Some items contributed to the CRT component only, some items contributed to the NRT component only, and some items contributed to both CRT and NRT components.

The AIMS CRT reading tests for grades 4-8 consisted of 39 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 54 items. The AIMS CRT reading test for grade 3 consisted of 42 items developed by Arizona teachers and 12 *TerraNova* items that map to the Arizona content standards for a total of 54 items. The raw scores on all tests ranged from 0-54. Detailed test structure information can be found in Table 3.3.1. Scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT reading is discussed in Part 7 of this technical report.

The left hand side of Table 3.3.1 presents the number of items that contributed to the AIMS reading CRT component, the AIMS reading NRT component, and the AIMS language NRT component for each grade. The number of *TerraNova* reading items that contributed to both AIMS reading CRT and AIMS reading NRT component is also reported. The total number of test items on the test is the composite of the number of field test items, CRT items, NRT reading, and NRT language items.

The right hand side of Table 3.3.1 presents the number of anchor items used in the annual equating for each grade. The number of common dual purpose items and common NRT only items between 2006 and 2007 are also reported. The total number common item between years is the composite of the number of anchor items, common dual purpose items, and common NRT only items.

The AIMS NRT reading tests for grades 3-8 consisted of 25 *TerraNova* reading items from *TerraNova* Form D Complete Battery. The AIMS NRT reading tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The *TerraNova* reading items were embedded within the AIMS DPA reading test. Scale scores are reported on the *TerraNova* reading NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30.

The AIMS NRT language tests for grades 3-8 consisted of 20 *TerraNova* language items from *TerraNova* Form D Complete Battery. The AIMS NRT language tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The *TerraNova* language items were embedded within the AIMS DPA reading test. Scale scores are reported on the *TerraNova* language NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Tables 3.3.3 and 3.3.4 present more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests.

### **3.3.5 Grades 3-8 Writing**

The AIMS writing tests for grades 3-8 consisted of one extended response writing prompt per administration reporting to a criterion-referenced score only. Responses to the prompt were scored on the six-trait analytic rubric. Each trait received one rating. The raw scores ranged from 0-36.

Scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT writing is discussed in Part 7 of this technical report.

### **3.3.6 Grades 3-8 Mathematics (Dual Purpose Assessment)**

The AIMS mathematics tests for grades 3-8 consisted of both a criterion-referenced and norm-referenced component to allow for both criterion-referenced and norm-referenced scores. Some items contributed to CRT scores only, some items contributed to NRT scores only, and some items contributed to both CRT and NRT scores.

The AIMS CRT mathematics tests for grades 3 consisted of 57 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 72 items. The AIMS CRT mathematics tests for grades 4 consisted of 55 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 70 items. The AIMS CRT mathematics tests for grades 5 through 7 consisted of 53 items developed by Arizona teachers and 15 *TerraNova* items that map to the Arizona content standards for a total of 68 items. The AIMS CRT mathematics test for grade 8 consisted of 53 items developed by Arizona teachers and 13 TN items that map to the Arizona content standards for a total of 66 items. Detailed test structure information can be found in Tables 3.3.2. The raw score and scale score ranges are presented in Table 3.3.6. Scaling of AIMS CRT mathematics is discussed in Part 7 of this technical report.

The left hand side of Table 3.3.2 presents the break down of the number of items that contributed to the AIMS mathematics CRT and the AIMS mathematics NRT component for each grade. The number of *TerraNova* mathematics items that contributed to both components is also reported. The total number of test items on the test is the composite of the number of field test items, the number of CRT items, and the number of NRT items.

The right hand side of Table 3.3.2 presents the number of anchor items used in the annual equating for each grade. The number of common dual purpose items and NRT only items between 2006 and 2007 is also reported. The total number common item between years is the composite of the number of anchor items, the number of common dual purpose items, and the number of common NRT only items.

The AIMS NRT mathematics tests for grades 3-8 consisted of 25 *TerraNova* mathematics items from *TerraNova* Form D Complete Battery. The AIMS NRT mathematics tests closely approximated the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. Scale scores are reported on the *TerraNova* mathematics NRT scale. Norms are reported using the 2000 *TerraNova* norms and a quarter month of 30. Table 3.3.5 presents more detailed information about the blueprint representation of *TerraNova* Form D Complete Battery and the AIMS NRT tests.

Items on the AIMS DPA reading and mathematics tests that reported to a criterion-referenced score were either developed by Arizona teachers or were *TerraNova* items that matched the Arizona content standards. No norm-referenced only reading items or mathematics items reported to the AIMS DPA criterion referenced scores. No *TerraNova* language items reported to the AIMS DPA criterion referenced scores for writing.

### **3.3.7 Language Arts Composite**

A language arts composite score was also computed for each student. This composite is the mathematical average of the AIMS reading and writing scale scores. The language arts score is not reported to students, parents, or teachers. This composite score is provided to ADE in the electronic data only for calculating and reporting annual yearly progress under NCLB legislation.

**Table 3.3.1 Spring 2007 AIMS Test Structure Reading and Language**

Grade	FT	RD CRT only	RD NRT /CRT	RD NRT only	RD CRT TOTAL (CRT + NRT/CRT)	RD NRT TOTAL	LA NRT only	LA NRT TOTAL	TOTAL ITEMS ON TEST	I. Anchor Items	II. Common NRT/CRT Items	III. Common NRT items	Total Common Items (I+II+III)
3	10	42	12	13	54	25	20	20	97	21	12	13	46
4	10	39	15	10	54	25	20	20	94	24	15	10	49
5	10	39	15	10	54	25	20	20	94	19	15	10	44
6	10	39	15	10	54	25	20	20	94	25	15	10	50
7	10	39	15	10	54	25	20	20	94	20	15	10	45
8	10	39	15	10	54	25	20	20	94	20	15	10	45
HS*	10	54			54				64	22			22

\*High School has 10 embedded field test forms, for a total of 100 field test items.

**Table 3.3.2 Spring 2007 AIMS Test Structure Math**

Grade	FT	MA CRT only	MA NRT /CRT	MA NRT only	MA CRT TOTAL (CRT + NRT/CRT)	MA NRT TOTAL	TOTAL ITEMS ON TEST	I. Anchor Items	II. Common NRT/CRT Items	III. Common NRT Items	Total Common Items (I+II+III)
3	10	57	15	10	72	25	92	37	15	10	62
4	10	55	15	10	70	25	90	36	15	10	61
5	10	53	15	10	68	25	88	30	15	10	55
6	10	53	15	10	68	25	88	30	15	10	55
7	10	53	15	10	68	25	88	32	15	10	57
8	10	53	13	12	66	25	88	37	13	12	62
HS*	15	85			85		100	42			42

\*High School test has 10 embedded field test forms, for a total of 150 field test items.

\*High School Braille has one less item than regular form since one item as suppressed suppressed item happens to be an anchor item. The number of anchor items is 41.

**Table 3.3.3 TerraNova and AIMS NRT Blueprint Representation Reading**

Grade	TerraNova Strand					Total
	02 Basic Understanding	03 Analyze Text	04 Evaluate and Extend Meaning	05 Identify Reading Strategies		
3						
	N items TN CB	14	10	8	10	42
	% items TN CB	33%	24%	19%	24%	100%
	N items AIMS NRT	8	8	4	5	25
	% items AIMS NRT	32%	32%	16%	20%	100%
4						
	N items TN CB	18	19	7	6	50
	% items TN CB	36%	38%	14%	12%	100%
	N items AIMS NRT	9	9	4	3	25
	% items AIMS NRT	36%	36%	16%	12%	100%
5						
	N items TN CB	14	15	8	9	46
	% items TN CB	30%	33%	17%	20%	100%
	N items AIMS NRT	8	8	4	5	25
	% items AIMS NRT	32%	32%	16%	20%	100%
6						
	N items TN CB	16	12	5	9	42
	% items TN CB	38%	29%	12%	21%	100%
	N items AIMS NRT	9	8	3	5	25
	% items AIMS NRT	36%	32%	12%	20%	100%
7						
	N items TN CB	13	18	12	7	50
	% items TN CB	26%	36%	24%	14%	100%
	N items AIMS NRT	6	9	6	4	25
	% items AIMS NRT	24%	36%	24%	16%	100%
8						
	N items TN CB	16	17	9	6	48
	% items TN CB	33%	35%	19%	13%	100%
	N items AIMS NRT	8	9	5	3	25
	% items AIMS NRT	32%	36%	20%	12%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

**Table 3.3.4 TerraNova and AIMS NRT Blueprint Representation Language**

Grade	<i>TerraNova</i> Strand			
	07 Sentence Structure	08 Writing Strategies	09 Editing Skills	Total
3				
N items TN CB	7	8	13	28
% items TN CB	25%	29%	46%	100%
N items AIMS NRT	5	5	10	20
% items AIMS NRT	25%	25%	50%	100%
4				
N items TN CB	7	8	15	30
% items TN CB	23%	27%	50%	100%
N items AIMS NRT	3	6	11	20
% items AIMS NRT	15%	30%	55%	100%
5				
N items TN CB	11	13	10	34
% items TN CB	32%	38%	29%	100%
N items AIMS NRT	6	8	6	20
% items AIMS NRT	30%	40%	30%	100%
6				
N items TN CB	10	16	12	38
% items TN CB	26%	42%	32%	100%
N items AIMS NRT	5	8	7	20
% items AIMS NRT	25%	40%	35%	100%
7				
N items TN CB	13	10	7	30
% items TN CB	43%	33%	23%	100%
N items AIMS NRT	8	7	5	20
% items AIMS NRT	40%	35%	25%	100%
8				
N items TN CB	8	13	11	32
% items TN CB	25%	41%	34%	100%
N items AIMS NRT	5	7	8	20
% items AIMS NRT	25%	35%	40%	100%

Note. TN CB= *TerraNova* Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

**Table 3.3.5 TerraNova and AIMS NRT Blueprint Representation Mathematics**

Grade	10 Number and Number Relations	11 Computation and Numerical Estimation	12 Operation Concepts	TerraNova Strand				17 Problem Solving and Reasoning	Total
	13 Measurement	14 Geometry and Spatial Sense	15 Data Analysis, Statistics, and Probability	16 Patterns, Functions, Algebra					
3									
	N items TN CB	8	12	4	6	6	4	4	50
	% items TN CB	16%	24%	8%	12%	12%	8%	8%	100%
	N items AIMS NRT	4	5	2	2	3	3	3	25
	% items AIMS NRT	16%	20%	8%	8%	12%	12%	12%	100%
4									
	N items TN CB	7	15	7	7	6	7	5	57
	% items TN CB	12%	26%	12%	12%	11%	12%	9%	100%
	N items AIMS NRT	3	6	4	3	3	1	2	25
	% items AIMS NRT	12%	24%	16%	12%	12%	4%	8%	100%
5									
	N items TN CB	11	12	5	6	6	4	4	57
	% items TN CB	19%	21%	9%	11%	11%	7%	7%	100%
	N items AIMS NRT	4	5	2	3	4	2	2	25
	% items AIMS NRT	16%	20%	8%	12%	16%	8%	8%	100%
6									
	N items TN CB	11	13	3	6	5	7	4	56
	% items TN CB	20%	23%	5%	11%	9%	13%	7%	100%
	N items AIMS NRT	5	4	2	3	3	4	2	25
	% items AIMS NRT	20%	16%	8%	12%	12%	8%	8%	100%
7									
	N items TN CB	10	12	2	6	7	6	4	57
	% items TN CB	18%	21%	4%	11%	12%	11%	7%	100%
	N items AIMS NRT	5	3	2	3	3	3	2	25
	% items AIMS NRT	20%	12%	8%	12%	12%	12%	8%	100%
8									
	N items TN CB	11	10	1	5	7	10	4	56
	% items TN CB	20%	18%	2%	9%	13%	18%	7%	100%
	N items AIMS NRT	5	3	1	2	3	4	3	25
	% items AIMS NRT	20%	12%	4%	8%	12%	16%	12%	100%

Note. TN CB= TerraNova Complete Battery D, AIMS NRT = Arizona Instrument to Measure Standards Norm Referenced Test.

**Table 3.3.6**  
**Raw Score and Scale Score ranges of AIMS 2007 CRT Assessments**

Content	Grade	Raw Score range	Scale Score range
Reading	3	0-54	200-640
	4	0-54	220-660
	5	0-54	240-675
	6	0-54	250-690
	7	0-54	260-720
	8	0-54	270-800
	HS <sup>a</sup>	0-54	500-900
Writing	3	0-36	200-650
	4	0-36	230-700
	5	0-36	255-740
	6	0-36	275-760
	7	0-36	290-770
	8	0-36	300-800
	HS <sup>a</sup>	0-36	500-900
Mathematics	3	0-72	200-650
	4	0-70	230-675
	5	0-68	255-700
	6	0-68	270-725
	7	0-68	290-740
	8	0-66	300-800
	HS <sup>a</sup>	0-84 <sup>b</sup>	500-900

<sup>a</sup>HS tests are not on the same scale as G3-8 tests. Scale scores are therefore not comparable between the HS and G3-8 tests. See Part 7 for information regarding the scaling of the AIMS assessment.

<sup>b</sup>Note that the HS assessment originally included 85 items. However, one item was dropped from the regular version and two items were dropped from the Braille version due to content considerations after test books were printed. Student test scores and all reports excluded the dropped items.

## **Part 4: Test Development**

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Part 4 of the technical report provides a summary of the test development activities that occurred during the 2006-2007 contract year. Information is provided relating to the following topics as they pertain to AIMS:

- a discussion of the AIMS test book creation and editing process;
- a description of the use of previously created AIMS item specifications;
- a description of the AIMS passage development and review procedures;
- a description of the AIMS Science stimulus and blueprint development and review procedures;
- a description of the AIMS item writing procedures;
- a description of content and bias/sensitivity review procedures for AIMS items;
- a description of the AIMS item selection committee meetings, and
- a description of the data analysis committee procedures.

A comprehensive, multi-segment development process guides the development of assessment materials. The following section outlines this process in general terms. The remainder of Part 4 provides details of how these processes were implemented in Arizona. This section of the technical report addresses the following AERA/APA/NCME standards: 1.6, 3.1, 3.5, 3.6, 3.7, 3.9, 3.11, 3.16, 6.4, 6.15, 7.3, 7.4, 7.7, 13.3, and 13.5.

### **4.1 AIMS Test Development and Editing Process**

#### **4.1.1 Test Development Process**

Test development for the 2007 test administration began with the customer kick-off meeting in February of 2006. During this phase, the project deliverables were defined, such as test books, answer documents, test administration manuals, test coordinator manuals, test interpretation guides, and materials to support special accommodations, including Braille and large print books. The actual test form design was unchanged from the previous year. The ancillary materials were modified and all modifications were discussed and shared among all team members to ensure understanding.

#### **4.1.2 Documents and Materials Development**

Following definition of project deliverables, CTB's entire test development team reviewed the blueprints, item specifications, and ADE style guide to insure that the 2007 assessment would meet all of the required, previously-developed criteria. New members were added to form the science team that would be responsible to guide the development of the science field test. Science stimulus and blueprint development committees were facilitated by CTB personnel in collaboration with ADE personnel. Field test items were developed for all content areas forms were developed to insure a sufficient supply of items would be available to be placed on operational forms for the 2007-2008 assessments.

#### **4.1.3 Item Development and Editing**

The development of AIMS assessments for 2006-2007 involved many professionals from CTB and ADE collaborating in an effort to insure that all newly developed items closely match the

Arizona Content Standards and the item specifications, while addressing the need to expand the Arizona Item Bank. The Arizona teachers selected to serve on item writing committees all possessed content and assessment expertise and the ability to be creative while adhering to the test blueprint, detailed item specifications, and content limits. There was a considerable amount of professional development provided to integrate new item writers with more experienced item writers. Test items were developed by Arizona teachers using a template to capture all requirements and supporting information such as strand, concept, performance objective, and content reference documentation. After the item writing workshops were concluded, test items were edited and revised by in-house content editors, style editors, art specialists, hand scoring staff, and research scientists for content appropriateness and standards match. CTB then prepared those items for the content and bias/sensitivity review committees. After passing these committees, the items were prepared for incorporation into the field test portion of the operational 2007 AIMS assessments.

#### **4.1.4 Quality Reviews**

ADE and CTB personnel implement a series of quality review checks at various stages of production to assure all AIMS materials are error free.

ADE first reviews each component at a relatively early stage of page production. Items are compared to the way they were presented to the content/bias review committee to be sure no unauthorized changes had been introduced. Answer keys are checked. All changes are approved in writing by ADE.

A smooth AIMS test administration requires that all test materials, including test books, answer documents, and directions to students and test coordinators align with each other. Therefore, CTB conducted a materials integration review (MIR) as the second quality check. A side benefit of this review was the possible revision of any unclear items.

Prior to creation of camera copy, CTB performed a third quality assurance (QA) review. The purpose of the QA review was to ensure that all publishable products met ADE's high quality standards and expectations.

After CTB conducted their QA review, all test forms were again submitted to ADE for review. All final forms and documents were reviewed and approved by ADE content specialists.

## **4.2 Pool of Items Used for Test Construction**

### **4.2.1 Item Specifications**

Prior to item writing for the 2006-07 testing year, ADE reviewed and revised (as needed) the item specifications that were first created in February 2005. The Item Specifications are living documents and need to be constantly reviewed. The purpose of the review and revision was to provide further clarity for how AIMS will measure students' understanding of the standards. This is based on feedback from previous item writing workshops. ADE staff reviewed the definition of what is being tested by each Performance Objective (PO) and where needed, clarified the PO statements, the content limits, and the stimulus and response attribute descriptions. Taken together, these revisions further help to inform instruction by explaining in detail what each PO means at each grade level and by describing how each PO is to be tested.

The resulting documents were used during item writing in March. Refinements and inputs were implemented. During item writing, it became clear that the item specifications would continue to require clarification and refinement in order to assure varied PO coverage within the test blueprint each year. More and varied illustrative samples for each PO need to be created that truly reflect the

item specification components and clearly test the PO. These item specifications should continue to be refined as needed.

#### 4.2.2 Passage Development and Review

The types of passages commissioned reflect the kinds of reading required by the AZ Reading Standards. Table 4.2.2.1 shows the kinds of passages commissioned to support the 2006-07 assessment (Literary, Expository, and Functional). Table 4.2.2.1 also shows that 54 of the 74 passages to be considered for field testing in spring 2007 were passages that had been commissioned for spring 2006 but not selected to be field tested that year. Of these 54, 23 had already been approved by a Passage Review committee and did not require further approval. These are shown in the columns shaded gray. The remaining 31 passages left from 2006 did require further approval, either because they had undergone significant changes since their first review or because they had not been reviewed at all the previous year. Regardless, the Spring 2007 passage development cycle began with a supply of 54 passages, leaving only 20 new passages to be developed.

Assignments for these 20 passages were created to address the obvious need to increase the number of Expository and Functional passages and items in the item bank. Arizona teachers were asked for topic suggestions that would be meaningful and relevant to students across the state. Passages were commissioned by the contractor. Passage authors included AZ educators, professional writers, and freelance writers.

Upon receiving newly-written passages, the contractor reviewed them to be sure:

- all were well-written;
- all were rich in content and subject matter;
- all were age and grade appropriate;
- all avoided stereotyping and controversial, confusing, or emotionally-charged topics;
- together they reflected a range of multi-cultural content;
- some reflected the diversity of Arizona and the Southwest region; and
- all were written in such a way that no group would have an advantage or disadvantage.

In all, 51 passages were prepared for a Passage Review workshop held on March 2 and 3, 2006. These were comprised of the 31 passages unused in Spring 2006 and the 20 newly commissioned passages.

**Table 4.2.2.1**  
**Types of Passages Commissioned**

Grade	Literary		Expository		Functional		Total On Hand	Total New Passages to Commission	Total for Passage Review
	Already Approved in 2006	Approval Required in 2007	Already Approved in 2006	Approval Required in 2007	Already Approved in 2006	Approval Required in 2007			
3	2	1	0	1	1	1	6	2	5
4	2	1	0	2	1	0	6	2	5
5	3	2	0	1	0	1	7	2	6
6	2	2	2	1	1	2	10	0	5
7	2	1	0	4	2	1	10	1	7
8	1	1	1	2	0	1	6	2	6
HS	1	1	2	4	0	1	9	11	17
<b>TOTAL</b>	<b>13</b>	<b>9</b>	<b>5</b>	<b>15</b>	<b>5</b>	<b>7</b>	<b>54</b>	<b>20</b>	<b>51</b>

Those 51 passages were prepared for review in Passage Review Books. Each grade level review book contained the passages for that grade. Each passage was on a template that included the word count, genre, and the POs for which items could be written. The template also included space for reviewers to indicate their acceptance or rejection of the passage based on two back-to-back reviews: one for content and one for sensitivity issues. During a general session, all reviewers were provided with the review criteria for each type of review.

Content criteria included:

- Prior Knowledge/Audience/Appropriateness – Subject matter should be grade appropriate and not require specialized knowledge or background on the part of the reader.
- Interest – The material should engage the student. Students should find the topic interesting
- Coherence/Cohesiveness – The passage should provide clear links between sentences and paragraphs. Antecedent reference should be clear and unambiguous.
- Writing Style/Passage Structure – The writing style should be consistent throughout the passage. Ideas should be presented in logical order.
- Unity/Purpose – Ideas should flow in a unified direction. The passage should have a clear purpose.
- Conceptual Density – Passage should place reasonable conceptual demands on the reader. New, unusual, or difficult terms should be explained using vocabulary familiar to the reader.
- Explication – Nonfiction passages should provide a balance between information that is stated directly and information that requires the reader to make inferences.
- Representation/Accuracy – Passages must represent their genre and contain factual information. Facts should be documented from reliable sources.
- Organizational Aids – Organizational aids, such as headings, diagrams, or introductions should be included where applicable.
- Story Structure – Passages should contain sufficient structure to support a variety of questions.

Sensitivity issues included:

- Passages should be free of specific references to or descriptions of events of extreme sadness or adversity; acts of physical or psychological violence; alcohol or drug abuse; vulgar language; or sex.
- Religious, political, social, or psychological issues should be presented so that more than one point of view is expressed; factual accuracy is maintained; controversial contemporary issues are avoided; and stereotypical descriptions of beliefs or customs are avoided.
- Offensive, disturbing, inappropriate language or content is not used.
- There should be no evidence of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, or occupation.

- Passages should be free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, or prior knowledge or experiences unrelated to the subject matter being tested.

Reviewers who represented all grade levels and Arizona's rich ethnic and cultural diversity read each passage, discussed its content, and either accepted passages as they were or suggested revisions which were incorporated during the review sessions. A laptop connected to a projector allowed participants to revise passages on the spot. Table 4.2.2.2 shows the number of passages brought to passage review and the number accepted. Of the 51 passages taken to Passage Review, 43 (approximately 84%) were accepted for use during item writing workshops

**Table 4.2.2.2**  
**Number of Passages Reviewed and Accepted**

Grade	Total Passages Reviewed	Total Passages Accepted
3	7	6
4	7	7
5	5	3
6	3	2
7	7	5
8	7	7
HS	15	13
<b>TOTAL</b>	<b>51</b>	<b>43</b>

The 43 newly accepted passages were considered for item writing use along with the 23 passages that had been approved in 2006 (but not used). Because there were more passages reviewed than actually needed, the committees ranked the passages and selected the passages for which items would be written. Accepted passages were available for item writing later in the month.

### 4.2.3 Item Writing

Items for the AIMS CRT tests are written by Arizona teachers and facilitated by the testing contractor. Item writing workshops were conducted in Arizona on March 15-17 and March 22-24, 2006. In addition to representing all grade levels and geographic regions of the state, writers were selected on the basis of the criteria already established for item writers by ADE. Their task was to write sufficient items to bring to Content/Sensitivity review and still have the number of items needed, after attrition, to support the spring 2007 assessments. For DPA reading and math, this meant writing enough items to field test four forms per grade. For High School reading and math, this meant writing enough items to support 15 forms. For science grades 4, 8, and High School, this meant writing enough items to support five forms per grade. DPA item writing teams were arranged by grade level pairs with their work spread over two three-day sessions. Reading and math item writing was completed in the first three-day session. Science items were written in both sessions and required an additional weekend facilitated by ADE. Table 4.2.3 shows the team arrangement, the number of items needed per grade, the number of existing, unused items written in 2006 that could be revised and used in 2007, the number of new items they were expected to produce, and the time allotted for their task. Appendix B contains the item writer selection criteria. Appendix C contains the PowerPoint slides used during the AIMS Item Writing Workshop.

**Table 4.2.3**  
**Item Writing Plan**

Content Area	Grade	Total Items Needed	Items on Hand to Revise	New items to Write	Days
Reading	3	105	40	65	3
	4	120	42	78	
	5	90	42	48	3
	6	90	41	49	
	7	105	41	64	3
	8	105	25	80	
	HS	255	55	200	3
Math	3	60	31	29	3
	4	60	34	26	
	5	60	33	27	3
	6	60	38	22	
	7	60	49	11	3
	8	60	30	30	
	HS	200	200	0	3
Science	4	315	0	315	8
	8	370	0	370	8
	HS	420	0	420	8
<b>TOTAL</b>		<b>2535</b>	<b>701</b>	<b>1834</b>	

Assignments were created to result in a set of items that would span the blueprints and enhance the item pool. Each group was given copies of the item specifications (see section 4.2.1), style guides, vocabulary word lists, and checklists to guide their writing. Writers worked in pairs to draft their items on templates. Facilitators entered the items electronically and projected them onto a screen during group editing sessions throughout each day. Together, the group reviewed each item to be sure the content, difficulty, and vocabulary were appropriate for the grade level; that the context, if any, was appealing and plausible; that distractors represented errors students would make; and confirmed that the intended PO was being assessed. They offered suggestions for revisions and rewrote items to everyone's satisfaction.

The contractor took the resulting items through another careful content review and style edited the items in preparation for Content/Sensitivity Review (see section 4.2.4). Items not chosen for field testing in Spring 2007 were retained for consideration the following year.

#### **4.2.4 Content/Sensitivity Review**

Content and Sensitivity Reviews for high school reading, high school math, and all science items were conducted on each item by Arizona educators and facilitated by the contractor in June 2006. Content and Sensitivity Reviews for DPA reading and math items were conducted by Arizona educators and facilitated by ADE in July 2006. The purposes of the Content Review were to verify the accuracy, difficulty range, depth of knowledge, and grade-appropriateness of potential test items and to verify their alignment to the intended Performance Objective (PO). The purposes of the Sensitivity Review were to verify the items were free of stereotypes or other sources of bias and to confirm that they reflected community standards. Content and Sensitivity Reviews were conducted separately for each item. But, each item earned just one combined rating: Accept As Is, Accept with

**Revisions, or Reject.** Participants were selected on the basis of their ability to represent their grade level and to assure ethnic, racial, and gender representation. At the conclusion of the reviews, participants selected the passages and items that would be field tested in Spring 2007.

During general sessions, participants received training in what to check during their Content Review, including ensuring that the content of each item:

- is targeted to assess only one PO (unless specifications indicate otherwise);
- deals with material that is important in testing the targeted PO;
- uses grade-appropriate content;
- uses appropriate thinking skills (application, analysis, conclusions, extending);
- is presented at a reading level suitable for the grade level being tested;
- is accurate and documented against reliable, up-to-date sources;
- has a stem that facilitates answering the question or completing the statement without looking at the answer choices;
- has a stem that does not present clues to the correct answer choice;
- has answer choices that are plausible and attractive to the student who has not mastered the objective or skill;
- is conceptually, grammatically, and syntactically consistent—between the stem and answer choices, and among the answer choices;
- has mutually exclusive distractors; and
- has one and only one correct answer choice.

During general sessions, participants received training on what to check during their Sensitivity Review, including ensuring that each item:

- is free of offensive, disturbing, or inappropriate language or content;
- is free of stereotyping based on gender, race, ethnicity, religion, socioeconomic status, age, regional or geographic area, disability, and occupation;
- demonstrates sensitivity to historical representation of groups; and
- is free of differential familiarity for any group based on language, socioeconomic status, regional or geographic area, and prior knowledge or experiences unrelated to the subject matter being tested.

Participants were also asked to ensure that the content of each item was free of explicit references to or descriptions of events involving extreme sadness or adversity; acts of physical or psychological violence; alcohol or drug abuse; vulgar language; or sex.

Throughout the Sensitivity Review, participants were asked to ensure that more than one point of view is expressed when any religious, political, social, or philosophical issues are addressed; beliefs or biases do not interfere with factual accuracy; contemporary issues that have already been proven to be controversial are absent; and stereotypic descriptions of beliefs or customs are absent.

During the reviews, participants were frequently encouraged to discuss each item and to make revisions that would bring the item into compliance with the above conditions. As they worked, participants were asked to consider the items two separate ways – once for content and once for sensitivity. Considering the results of both reviews, participants were asked to

place the items into the following categories: Accept as Is, Accept with Revisions, or Reject.

Overall, the acceptance rates were quite high. Across all grade levels, 88% of the items reviewed were accepted either as is or with revisions. Table 4.2.4.1 shows the number and portion of items classified into each category during Content and Sensitivity Reviews by grade level and content area.

Any item that was rejected either for content or for sensitivity issues was removed from consideration for field testing. In order to ultimately contribute to an item bank of items that measure and support the curriculum and state content standards, selection of the field test items was guided by the test blueprints. The goal was to select 10 items for Grades 3 through 8 per content area (reading and mathematics) per form, 10 items for high school reading per form, 15 items for high school mathematics per form, and 42 items for grades 4, 8, and high school science per form so that item data could be collected. Field test item selection was performed by Content/Sensitivity Review participants. Selections were subject to approval by ADE staff. Table 4.2.4.2 shows that 1,360 field test items were selected for inclusion in field test books.

**Table 4.2.4.1**  
**Content and Sensitivity Review Results**

Content Area	Grade	Items Reviewed	Accepted As Is	Accepted with Revisions	Rejected	
Reading	3	84	45	54%	26	31%
	4	83	56	67%	14	17%
	5	68	24	35%	33	49%
	6	63	26	41%	23	37%
	7	72	38	53%	25	35%
	8	72	32	44%	29	40%
	HS	235	108	46%	105	45%
	Reading Total	677	329	49%	255	38%
Math	3	57	31	54%	12	21%
	4	51	31	61%	12	24%
	5	50	25	50%	21	42%
	6	49	29	58%	14	28%
	7	46	21	46%	19	41%
	8	49	23	47%	17	35%
	HS	199	149	75%	41	21%
	Math Total	501	309	62%	136	27%
Science	4	328	110	34%	174	53%
	8	306	129	42%	146	48%
	HS	315	107	34%	180	57%
	Science Total	949	346	36%	500	53%
Grand total		2127	984	46%	891	42%
					252	12%

**Table 4.2.4.2**  
**Number of Field Test Items Selected**

Content Area	Number of Grades	Number of Forms	Number of Items Selected
Reading	6 (Gr3 through 8)	4	240
Reading	1 (HS)	10	100
Math	6 (Gr3 through 8)	4	240
Math	1 (HS)	10	150
Science	3 (Gr 4, 8, HS)	5	630
<b>TOTAL</b>			<b>1360</b>

#### 4.2.5 AIMS CRT Item Selection

AIMS CRT Item Selection was conducted August 1 and 2, 2006. A team of seven experienced test developers from CTB facilitated the item selection meeting. Arizona participants included five to seven teachers per grade for each of grades 3 through 8 and high school. The primary purpose of the Item Selection meeting was to have Arizona educators select valid and reliable test forms for the 2007 Spring AIMS assessments for grades 3 through 8 and high school for reading and mathematics using items from previous test administrations. Two sets of criteria guided the selection of AIMS items: content representation and statistical requirements.

All of the items in the item bank that were available and eligible for selection as operational items in Spring 2007 were displayed on grade level and content area Item Pool tables. With minor exceptions, the pool consisted of items field tested in 2002 through 2005. The items field tested in Spring 2006 had not yet been examined by a data analysis committee and were considered for selection only in the rare cases where no suitable items were available in the item bank. The Item Pool tables for the math committees were arranged by Performance Objective. The Item Pool tables for the reading committees were arranged by passage. All tables could also be sorted according to any of the columns, making them extremely useful tools for searching for items with specific characteristics. These items formed the pool for item selection. Item images could be viewed electronically via the item bank. Each meeting room was equipped with a laptop loaded with the item bank and a projection screen so that the entire group could view items at the same time.

Each entry on the table contained identification numbers, content alignment information (Strand, Concept, Performance Objective), Performance Objective statements, the most recent test administration, and statistical information about that item (p-value, point biserial, differential item functioning summary flags, Rasch model fit statistics, and the percent of students who omitted the item). Participants were given training to interpret these statistics and statistical guidelines for test selection. These guidelines included a target difficulty level for each test. Specifically, a target mean and standard deviation of selected item p-values, as well as a suggested distribution for the item p-values was provided for each grade/subject combination. Careful adherence to the specified distribution of p-values guaranteed students a reasonable opportunity to do well on a test that would be neither too easy nor too hard.

In addition to selecting items within specific p-values ranges, staff members were also asked to select items with item discriminations that indicate that getting the item correct is reasonably correlated with performance on the entire test (i.e., preferably item correlations greater than 0.3) and do not exhibit the potential for item bias (i.e., the items should not be flagged using various differential item functioning statistics). Though the committees were not provided with Rasch model

fit statistics, internal approval procedures just after item selections were completed further ensured that the selected items would be well estimated in the item calibration analyses.

Content considerations were addressed by the test blueprints. Careful adherence to the blueprints guaranteed the tests would validly measure the construct of math and reading as represented in the Arizona state content standards, maintain consistency, link to instruction, and allow for selection of items from different performance objectives within each concept. Substantial variance from the test blueprint could alter the test alignment and thus the validity of the scores being reported. Items were selected to represent the significant content categories specified in the test blueprint in the same proportion as the content categories represented in the test blueprint.

To facilitate the selection process and to guarantee that the proper number and proportion of items would be selected, participants were provided with Item Replacement Tables. The sample shown in Table 4.2.5.2 is a portion of the Item Replacement Table used by the participants to study their replacement requirements for Grade 3 Mathematics. This table shows the portion relevant to Strand 1 Concept 1 only. The entire table included all strands and concepts. The information in the first column shows the blueprint requirements for Strand 1, Concept 1 – 15% of the 72 Operational items (i.e., 11 items) should be covered by items from Strand 1, Concept 1 in the Grade 3 Mathematics test. The next two columns show that two of those 11 items are covered by *TerraNova* NRT/CRT items, leaving 9 slots to be filled with AZ items. Similar columns were provided for each element of the blueprint, guaranteeing exact adherence to the blueprint.

The set of columns labeled Spring 05 Operational Items include all of the AZ items covering Strand 1 Concept 1 that were in the Spring 2005 test. Highlighted rows indicate items designated as drift anchors. During item selection for Spring 2006, the participants' task was to replace these highlighted drift anchor items. The set of columns labeled Spring 06 Operational Items show the items selected to replace the drift anchors as well as the items that were retained from the Spring 2005 administration. These retained items were designated as anchor items. During item selection for Spring 2007, the participants' task was to retain the anchor items and replace the rest. As the participants considered each option based on content and difficulty, they could refer to the Item Pool Table to determine if the statistical considerations were being met and to the item bank to see the items.

As selections were made, they were recorded on Item Replacement Tables. These tables were loaded onto computers and projected for group discussion. These tables provided a running record of the selections and further helped to guarantee blueprint coverage.

These tables were completed for all selections and were subject to approval by both ADE and CTB/McGraw-Hill's Research department.

Table 4.2.5.3 shows the number of AIMS items that were selected for each grade. All selections were approved by CTB research staff and ADE staff.

**Table 4.2.5.1**  
**Sample Grade 3 Mathematics Item Pool Table**

AZID	PEID	Grade	Content	Strand	Concept	PO	PO statements	Administration	PValue	DIF M F		DIF W B		DIF W H		DIF W A		DIF W Am		BSR	Infit	Outfit	% Omit
										DIF	M	F	DIF	W	B	DIF	W	H	DIF	W	A		
3258383	586610	3	MA	1	1	1	PO 1. Read whole numbers in contextual situations (through six-digit numbers).	Spring 2005	0.8034	A	A	A	A	A	B>	0.43	1.0	0.9	0.7				
3260723	586916	3	MA	1	1	2	PO 2. Identify six-digit whole numbers in or out of order.	Spring 2005	0.8358	A	A	A	A	A	B>	0.46	0.9	0.8	0.4				
3258387	586792	3	MA	1	1	3	PO 3. Write whole numbers through six-digits in or out of order.	Spring 2005	0.9015	A	A	A	A	A	A	0.42	0.9	0.8	0.9				
3258393	586796	3	MA	1	1	4	PO 4. State whole numbers, through six-digits, with correct place value, by using models, illustrations, symbols, or expanded notation.	Spring 2005	0.8998	A	C<	A	A	A	A	0.39	0.9	0.8	0.7				
3258395	586650	3	MA	1	1	5	PO 5. Construct models to represent place value concepts for the one's, ten's, and hundred's places.	Spring 2005	0.9184	A	A	A	A	A	A	0.42	0.9	0.6	0.5				
3258423	586826	3	MA	1	1	6	PO 6. Apply expanded notation to model place value through 9,999.	Spring 2005	0.9149	B<	A	A	A	A	A	0.37	0.9	0.7	0.5				
3258426	586818	3	MA	1	1	7	PO 7. Sort whole numbers into sets containing only odd numbers or only even numbers.	Spring 2005	0.7192	A	A	A	A	A	A	0.53	0.9	0.8	0.9				
3258429	586680	3	MA	1	1	8	PO 8. Compare two whole numbers, through six-digits.	Spring 2005	0.8443	B<	A	A	A	A	A	0.43	0.9	0.8	0.9				
3258431	586684	3	MA	1	1	9	PO 9. Order three or more whole numbers through six-digit numbers (least to greatest, or greatest to least).	Spring 2005	0.6928	A	A	A	A	A	A	0.39	1.0	1.1	0.6				
3258426	586818	3	MA	1	1	7	PO 7. Sort whole numbers into sets containing only odd numbers or only even numbers.	Spring 2005	0.7192	A	A	A	A	A	A	0.53	0.9	0.8	0.9				
3258438	586874	3	MA	1	1	11	PO 11. Identify symbols, words, or models that represent proper fractions (halves, thirds, fourths, eighths and tenths).	Spring 2005	0.7773	A	A	A	A	A	A	0.44	1.0	0.9	0.3				
3306285	586628	3	MA	1	1	12	PO 12. Use proper fractions in contextual situations.	Spring 2005	0.6013	A	A	A	A	A	A	0.34	1.1	1.2	0.6				
3258441	586726	3	MA	1	1	13	PO 13. Compare two proper fractions with like denominators.	Spring 2005	0.7125	A	A	A	A	A	A	0.16	1.3	1.5	0.7				
3258469	586896	3	MA	1	1	14	PO 14. Order three or more proper fractions with like denominators (halves, thirds, fourths, eighths, and tenths).	Spring 2005	0.7573	A	A	A	A	A	A	0.20	1.2	1.8	0.6				
3258470	586778	3	MA	1	1	15	PO 15. Count amounts of money through \$20.00 using pictures or actual bills and coins.	Spring 2005	0.8143	C<	A	A	A	A	A	0.48	0.9	0.7	0.5				
3258472	586908	3	MA	1	1	16	PO 16. Use decimals through hundredths in contextual situations.	Spring 2005	0.6583	A	A	A	A	A	A	0.35	1.1	1.3	0.9				
3260676	586914	3	MA	1	1	17	PO 17. Compare two decimals, through hundredths, using models, illustrations, or symbols.	Spring 2005	0.6975	A	A	A	A	A	A	0.32	1.1	1.3	0.3				
3258480	586644	3	MA	1	1	18	PO 18. Order three or more decimals, through hundredths, using models, illustrations, or symbols.	Spring 2005	0.7442	A	A	A	A	A	A	0.37	1.0	1.2	0.7				
3258443	586816	3	MA	1	1	19	PO 19. Determine the equivalency among decimals, fractions, and percents.	Spring 2005	0.4505	C<	A	B<	A	A	A	0.50	0.9	0.9	0.8				
3148309	694676	3	MA	1	1	20	PO 20. Identify whole-number factors and/or pairs of factors for a given whole number through 24.	Spring 2004	0.317	A	A	A	A	A	A	0.16	1.2	1.8	1.0				
3260650	586870	3	MA	1	1	21	PO 21. Determine multiples of a given whole number with products through 24 (skip counting).	Spring 2005	0.9179	A	A	A	A	A	A	0.40	0.9	0.7	0.6				

**Table 4.2.5.2**  
**Sample Grade 3 Mathematics Item Replacement Table**

# of Items Required per Blueprint	# of TN Items in Test	# of AZ Items needed	Strand Concept	Spring 05 - Operational Items					Spring 06 - Operational Items					Spring 07 - New Operational Items Selections				
				Actual # of AZ Items in Spring 05	Item #	AZID	P-VALUE	Anchor Status	Actual # of AZ Items in Spring 06	AZID	PEID	P-VALUE	Anchor Status	Actual # of AZ Items in Spring 07	AZID	PEID	P-VALUE	Anchor Status
11	2	9	1 1	9	35	3148275	0.84	Anc	9	3148275	00586520	0.84	Anc	9	3148275	00586520	0.84	Anc
					69	3148310	0.71	Drift Anc		3258441	00586726	0.71			3148311	00586546	0.79	Anc
					61	3148311	0.79	Anc		3148311	00586546	0.79			3258472	00586908	0.66	
					90	3148314	0.58	Drift Anc		3258383	00586610	0.80			3258431	00586684	0.69	
					74	3157143	0.66	Drift Anc		3148288	00586536	0.76	Anc		3148288	00586536	0.76	Anc
					11	3015074	0.79	Drift Anc		3258443	00586816	0.45			3148308	00586556	0.63	Anc
					56	3148288	0.76	Anc		3148308	00586556	0.63			3148308	00586556	0.63	
					82	3148306	0.66	Drift Anc										
					66	3148308	0.63	Anc										

**Table 4.2.5.3**  
**Number of Items Selected by Committee**

Content Area	Grade	CRT-only items	Replacement Items Selected	
Reading	3	42	25	60%
	4	39	15	38%
	5	39	20	51%
	6	39	14	36%
	7	39	21	54%
	8	39	19	49%
	HS	54	32	59%
Reading Total		291	146	50%
Math	3	57	20	35%
	4	55	19	35%
	5	53	23	43%
	6	53	24	45%
	7	53	20	38%
	8	53	16	30%
	HS	85	47	55%
Math Total		409	169	41%
Grand Total		700	315	45%

#### 4.2.6 AIMS NRT Item Selection

The *TerraNova* component of the 2005 and 2006 AIMS assessment was replicated in the 2007 AIMS administration. Specifically, the *TerraNova* items that yield the NRT scores for the 2007 AIMS assessment and the subset of *TerraNova* items that contributed to the CRT portion of the 2007 AIMS were identical to those on the 2006 and 2005 AIMS administration.

The *TerraNova* items embedded in the AIMS DPA assessment were selected to match the test blueprint and statistical criteria of *TerraNova* Form D Complete Battery. The differences in blue print representation between the *TerraNova* component embedded in the AIMS DPA assessment and the *TerraNova* Form D Complete Battery are summarized below.

For *TerraNova* Reading, the difference in blueprint representation at the strand level exceeded 5% in only one strand in the grade 3 test. The difference in blueprint representation in all other strands in grades 3-8 did not exceed 3%. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

For *TerraNova* Language, difference in blueprint representation did not exceed 5% at the strand level with the exception of one strand in grade 4 and two strands in grade 8 where the differences were 6%, 6%, and 8%, respectively. The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

For *TerraNova* mathematics, the difference in blueprint representation at the strand level did not exceed 5% with the exception of one strand in grade 6 (7%), one strand in grade 7 (9%), and one strand in grade 8 (6%). The difference between test characteristic curves in terms of expected percent of maximum raw score did not exceed 2%.

The 2005 AIMS Technical Report contains more information about how the *TerraNova* items were selected in 2005. Copies of the 2005 AIMS Technical Report are available from Arizona Department of Education at the following web address:

[www.azed.gov/standards/aims/Administering/AMSTechReport2005.pdf](http://www.azed.gov/standards/aims/Administering/AMSTechReport2005.pdf)

#### 4.2.7 Data Analysis Committee

On November 3-4 2006, a Data Analysis committee was conducted to determine if the items that had been field tested in the spring of 2006 should be included in the Item Bank and be eligible for inclusion on future AIMS assessments. A committee of Arizona teachers studied item cards that included relevant statistics along with a copy of the item. Three options were open to this committee: items could be considered as Item Available (IA) for use in future tests; to be revised and re-field tested (RFT); or as a Do Not Use (DNU), meaning the item is not salvageable. Items designated DNU will appear in the item bank, but will not be used on any future test.

**Table 4.2.7.1**  
**AIMS Items Given Special Codes**

Content Area	Grade	Items Coded Item Available (IA)	Items Coded Revise/Re-field Test (RFT)	Items Coded Do Not Use (DNU)	Total
Reading	3	8	80%	0	10
	4	10	100%	0	10
	5	10	100%	0	10
	6	9	90%	0	10
	7	9	90%	0	10
	8	6	60%	0	10
	HS	128	85%	0	150
<b>Total</b>		<b>180</b>	<b>86%</b>	<b>0</b>	<b>210</b>
Mathematics	3	7	70%	2	10
	4	4	40%	3	10
	5	8	80%	2	10
	6	8	80%	1	10
	7	8	80%	2	10
	8	8	80%	2	10
	HS	177	79%	41	224
<b>Total</b>		<b>220</b>	<b>77%</b>	<b>53</b>	<b>284</b>
<b>Grand Total</b>		<b>400</b>	<b>81%</b>	<b>53</b>	<b>494</b>

#### 4.3 Customer Approvals

Approvals from ADE staff were obtained during several phases of development: during selection of the CRT items, after second pages were created, at the completion of the QA reviews, and when pre-press test books were available. Each is described below.

##### 4.3.1 Item Selection Approval

Since the item selection was conducted in AZ, item selection approvals were obtained on site at the end of each day. ADE staff members were given the Item Replacement Tables and the item cards. Content was the main focus of this review. Approval was verbal. The item selection tables were then sent electronically to the contract's Research Scientist for approval. Psychometric evaluation of the test selection was the main focus of this review. Recommended changes were discussed with and approved by ADE.

##### 4.3.2 Second Pages Approvals

At the second pages phase of development, items had been arranged into test book format. That is, they were no longer treated as individual items, but appeared in page layouts as they would

appear in the final, printed test books. By this point, all content issues should have been resolved. That is, the focus of this approval was on format and presentation issues, rather than on content issues. Formal approval was given. Desired changes were communicated via email and Edit Request Form which included a description of the change, a justification, and space for the customer to grant or deny approval. Formal sign-off of second pages by ADE was achieved via a Request for ADE Approval (RAA) document.

#### **4.3.3 FTP Site**

A secure FTP site has been established for transfer of electronic documents (annotated test books, test book reviews, confirming copies, etc.) that need to be reviewed by ADE staff. After careful review by ADE staff, corrections and edits are transmitted to CTB for inclusion/revision of the test documents.

#### **4.3.4 Materials Integration Review (MIR)**

The MIR review provides an opportunity for CTB staff members who have not previously seen the test materials to review them. This review also helps assure that test books, answer documents, and test administration directions all work in concert. A MIR summary lists any anomalies found.

#### **4.3.5 Quality Assurance (QA) Review (CTB)**

The QA review provides another opportunity for CTB staff members who have not previously seen the test materials to review them. This review focuses on detecting errors, inconsistencies, and cosmetic errors. A QA summary lists any problems found.

#### **4.3.6 ADE Quality Review**

After CTB has had an opportunity to review and edit test documents, ADE staff conduct a final review of “second pages” and “confirming copies” to determine if all edits have been accomplished properly.

#### **4.3.7 Final Sign-off**

A final, formal approval (blue line stage) is given as test books became available for printing. items and field test items in each form. A copy of the test book is sent for ADE to review. A formal approval document (RAA) is also included to be signed and returned.

## Part 5: Test Administration

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Part 5 of the technical report describes administration procedures, including accommodations, security, and written procedures available to test administrators and school personnel. The following AERA/APA/NCME standards are addressed: 1.13, 3.3, 3.19, 3.20, 3.21, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.11, 6.15, 9.1, 10.1, and 10.2.

### 5.1 Accommodations

The same accommodations were made available for all of the Fall 2006 and Spring 2007 AIMS tests, including AIMS HS and AIMS DPA. In addition, in Grades 2 and 9, students were assessed in reading, language arts, and mathematics using *TerraNova*, a norm-referenced test published by CTB/McGraw-Hill. *TerraNova* was normed in 2000. The norming group included students with disabilities who received accommodations and students identified as English Learners. Therefore, all of the AIMS HS, AIMS DPA, and *TerraNova* assessments allow the same accommodations and include students who have received accommodations.

Students with disabilities who have an Individualized Education Program (IEP), or who have a 504 plan, may be considered for both universal and standard accommodations (described in section 5.1.1). Also, students identified as Limited English Proficient (LEP) and students who have been identified as Fluent English Proficient (FEP) for no more than two years may be considered for both universal and standard accommodations.

For the purposes of assessment, a Special Education student is eligible to receive services under the Individuals with Disabilities Education Improvement Act – 2004 (IDEA) and has an Individualized Education Program (IEP); and a 504 student is eligible under Section 504 of the Rehabilitation Act of 1973 and has a 504 Accommodation Plan.

An English Language Learner (ELL) is a student whose native language is other than English and is learning English as a second language. Limited English Proficient (LEP) is a term used to refer to a student whose English proficiency is still developing. Fluent English Proficient (FEP) is a term that is used to refer to a student that scores at the proficient level of the state mandated English language proficiency assessment. The Arizona English Language Learner Assessment (AZELLA), a language proficiency assessment, is given to determine a student's proficiency in English and respective instructional placement.

Detailed information about testing accommodations was included in the document, *Testing Accommodations: Guidelines for 2006-2007* on the ADE website. This document was posted at the following location: [www.azed.gov/standards/aims/Administering/TestingAccommodations2007-08.pdf](http://www.azed.gov/standards/aims/Administering/TestingAccommodations2007-08.pdf). Additional information on accommodations can be found at [www.azed.gov/AIMS/FAQs/ESS.asp](http://www.azed.gov/AIMS/FAQs/ESS.asp).

#### 5.1.1 Overview of Accommodations

Accommodations are specific practices and procedures that provide students with equitable access during instruction and assessment. Accommodations are made in order to provide a student equal access to learning and equal opportunity to demonstrate what is known. They are intended to reduce or even eliminate the effects of a student's disability. Accommodations can be changes in the presentation, response, setting, and timing/scheduling of educational activities. There should be a direct connection between a student's disability or need and the accommodation(s) provided to the student during educational activities, including assessment.

Students should receive the same accommodations for classroom instruction, classroom assessments, district assessment, and state assessments. No accommodations should be provided during assessments that are not also provided during instruction. However, not all accommodations appropriate for instruction are appropriate for use during a standardized state assessment. **The accommodations available to students while testing on TerraNova, AIMS DPA, or AIMS HS are limited to those listed in later sections of this document.**

Accommodations may not provide verbal or other clues or suggestions that hint at or give away the correct response to the student. Therefore, it is not permissible to simplify, paraphrase, explain, or eliminate any test item, prompt, or multiple-choice option. Additionally, accommodations provided for one student may not impede or impact other students in the testing room. It is the responsibility of the Testing Administrator to see that each student, who qualifies for testing accommodations, receives these accommodations while also ensuring that other students, who do not receive accommodations, are not affected.

### **5.1.2 Descriptions of Universal, Standard, and Alternate Accommodations**

Arizona offers three levels of accommodations to students participating in state assessments: universal accommodations, standard accommodations, and alternate accommodations.

**Universal Accommodations** are provisions made for students that are in need of a minor change in testing practices or procedures in order to demonstrate their learning. Universal accommodations do not change what the student is responsible for learning or demonstrating. Students who are in need of universal accommodations do not necessarily have a disability that qualifies them for an IEP or a 504.

**Standard Accommodations** are provisions made in how a student accesses and demonstrates learning that does not substantially change the instructional level, the content, or the performance criteria. Students with disabilities who have an Individualized Education Program (IEP), or who have a 504 plan, may be considered for standard accommodations. Also, English Language Learners may be considered for standard accommodations.

**Alternate Accommodations** are provisions that involve substantial changes in what a student is expected to learn and/or in the way that learning is demonstrated. Such changes are made to provide a student with meaningful and productive learning experiences, environments, and assessments based on individual needs and abilities. Alternate accommodations affect the comparability of test scores. Only students with IEPs may be given alternate accommodations. IEP teams should exercise caution in considering whether a student requires an alternate accommodation in order to access the test. Students considered for these accommodations should receive at least part of their instruction through special education and be using such alternate accommodations consistently in their daily instruction. If an alternate accommodation is recommended by the IEP team, parents must be notified and the recommended alternate accommodation explained.

During the assessment, all accommodations for assessment identified in a student's IEP must be made available. However, students may choose not to use the accommodation(s).

### **5.1.3 Determining if a Student Needs a Testing Accommodation**

When students need accommodations in how they learn or demonstrate learning, they are likely to need accommodations in how they are assessed. Conversely, if students do not need accommodations in how they learn or demonstrate learning, they will not need accommodations in how they are assessed. Therefore, no accommodation can be put in place for assessment that is not also used for instruction.

To determine if a student will need testing accommodations to participate in state assessments, the following questions were asked:

- Does the student use accommodations during daily instruction?
- If the student uses accommodations during daily instructions, does the student need accommodations in order to participate in the state assessment?
- If so, which testing accommodations are necessary and appropriate for the student?

Guidelines presented in Table 5.1.1 are used to determine which specific testing accommodations are available to students while participating in a state assessment. It is important to annually re-consider the types of accommodations used for students, particularly as they gain more skills.

**Table 5.1.1**  
**2006 Fall and 2007 Spring AIMS Standard Accommodations**

<b>Universal Accommodations</b>	<b>All</b>	<b>ELL</b>	<b>504</b>	<b>Special Education</b>
extended testing time (on the same day)	x	x	x	x
a separate location or study carrel	x	x	x	x
preferential seating	x	x	x	x
special lighting	x	x	x	x
student wears noise buffers (after directions)	x	x	x	x
special furniture or pencil	x	x	x	x
familiar test administrator	x	x	x	x
repeat directions	x	x	x	x
color overlay	x	x	x	x

  

<b>Standard Accommodations</b>	<b>All</b>	<b>ELL</b>	<b>504</b>	<b>Special Education</b>
more breaks and/or several shorter sessions	x	x	x	x
small group administration or one-on-one testing	x	x	x	x
clarify or simplify language in directions in English	x	x	x	x
read aloud <b>math</b> or <b>writing</b> test items in English	x	x	x	x
provide a word-for-word published, paper translation dictionary	x			
exact oral translation of directions <b>as needed upon student request</b>	x			
read or sign directions		x	x	x
exact sign language interpretation of <b>math</b> or <b>writing</b> items		x	x	x
magnification device		x	x	x
amplification equipment		x	x	x
place marker use		x	x	x
large print or Braille edition of test		x	x	x
use of an abacus on math portion by a student who is blind		x	x	x
Braille writers *		x	x	x
write answers directly into test booklet *	x	x	x	x
record or dictate multiple choice responses to a scribe *	x		x	x
use assistive technology with spell check, grammar check, and predict ahead functions turned off *	x	x	x	x

\* For these accommodations, the student's responses must be transferred to the student's answer document as directed in the corresponding *Test Administration Directions* manual.

**Table 5.1.2**  
**Fall 2006 and Spring 2007 AIMS Alternate Accommodations**

<b>Alternate Accommodations</b>	<b>Special Education</b>
auditory presentation or interpretation through sign language systems of items on the Reading test	x
use of a four-function calculator, number chart, arithmetic tables, manipulatives, or abacus on Mathematics test	x
use assistive technology with spell check, grammar check, or predict-ahead functions on the Writing test*	x
record or dictate to a scribe on the Writing test*	x

\*For these accommodations, the student's responses must be transferred to the student's answer document as directed in the corresponding *Test Administration Directions* manual. If a scribe is used, the scribe may not alter the student's responses in any way. The student must provide writing conventions.

#### **5.1.4 Reporting Results of Assessments Taken with Accommodations**

Students who receive **standard** or **alternate** testing accommodations while participating in *TerraNova*, AIMS DPA, or AIMS HS must have their accommodations appropriately identified on their answer document as directed in the corresponding Test Administration Directions. It is not necessary to identify students who received **universal** accommodations while participating in *TerraNova*, AIMS DPA, or AIMS HS.

The use of **standard** accommodations results in scores that are considered valid for comparison and accountability purposes. The results for students who participated in assessments with **standard** accommodations will be included in aggregate results at the school, district, and state level on the paper reports provided by the testing contractor. Students who received **standard** accommodations on AIMS DPA and AIMS HS will count as having tested for federal accountability (AYP) purposes.

The use of **alternate** accommodations results in scores that are considered invalid for comparison and accountability purposes. The results for students who participated in assessments with **alternate** accommodations will not be included in aggregate results at the school, district, and state level on the paper reports provided by the testing contractor. Students who received **alternate** accommodations on AIMS DPA or AIMS HS will not count as having tested for AYP purposes.

#### **5.2 Test Security**

All AIMS tests were administered under secure testing conditions. Figure 5.2.1 includes the security agreement signed by personnel involved with testing administration.

#### **5.3 Test Administration**

In order to ensure standardized testing administration for all students, a Test Coordinator's manual was made available to all test coordinators for the Fall 2006 and Spring 2007 administrations (ADE, 2006, 2007). The manual included the following topics:

- Test Security
- Schedule of Important Dates
- District/Charter Holder Test Coordinator's Responsibilities
- Scheduling Test Administration
- Test Setting and Test Administrators
- Students to be Tested
- Data Grid
- Test Materials
- Receiving Test Materials
- Inventorying Test Materials
- Procedures During Test Administration
- Procedures Following Test Administration
- Returning Materials to CTB/McGraw-Hill
- Test Security Agreement

Test Administration Directions (ADE, 2006 & 2007) were made available to all test administrators for the Fall 2006 and Spring 2007 assessments. They included the following:

- Arrangements Prior to Test Administration
- Test Materials and Testing Schedule
- Test Administration Guidelines
- Student Identification Information
- Detailed Scripts for Administration of Each Part of Each Test
- Procedures Following Test Administration

For specific information related to test administration, refer to the Test Coordinator's Manual and/or the Test Administration Directions.

Pre-test workshops were presented to all test coordinators across the state. Both ADE and CTB participated in these workshops. All districts are required to attend a pre-test workshop and makeup workshops are provided if someone misses a required workshop. Attendance is checked to verify attendance by at least one person per district or charter.

**Figure 5.2.1**  
**2007 Spring AIMS Test security agreement**

**Arizona's Instrument to Measure Standards  
AIMS HS/AIMS DPA/*TerraNova* Test Security Agreement  
Spring 2007**

The user (school district, charter operator, and/or school professional staff) acknowledges that AIMS High School, AIMS DPA, and *TerraNova* are secure tests and agrees to the following conditions of use to ensure the security of the tests:

1.
  - a) The user will take all necessary precautions to safeguard all test materials by limiting access to persons with the school district or agency with a responsible, professional interest in the test's security.
  - b) The names of all persons having access to the materials will be kept on file by the designated test coordinator.
  - c) All persons having access to the materials (other than students to whom the test is administered) will sign this test security agreement, which will be kept on file.
    - i. Building administrators will maintain signed agreements of building staff.
    - ii. Superintendent/charter representative will maintain signed agreements of building administrators.
    - iii. Superintendent/charter representative will sign for district and submit security agreement to ADE.
    - iv. ADE will maintain signed agreements of superintendents/charter representatives.
2.
  - a) The user will keep the test materials under lock and key, except on actual testing dates, limiting access to those responsible for their security.
  - b) Secure test materials, including test books and directions, will be delivered to examiners no sooner than the date of testing, unless logistics dictate an earlier delivery date.
  - c) Test materials will be kept secure until they are actually distributed to students.
  - d) In no case will students be permitted to remove test material from the room where testing takes place except under supervision of staff (students completing test).
3.
  - a) The user will not examine the test to determine the content beyond the requirements to administer the test.
  - b) The user will not disclose or allow to be disclosed the content of the test. The user will not discuss any test item at any time.
4. Upon completion of testing, the user will return all test materials to the designated test coordinator of the school/district.
5. The district superintendent or charter representative will develop, distribute, and enforce disciplinary procedures for the violation of test security by district or agency staff.
6. The user will follow the guidelines approved by the State Board of Education in January 2003 in the document *Test Preparation and Administration Practices*.
7. The user will follow all instructions in the Test Coordinator's Manual and the Test Administration Directions.

By signing my name to this document, I am assuring the Arizona Department of Education that I will abide by the above conditions and that anyone I supervise, who will have access to the AIMS HS, AIMS DPA, and *TerraNova* tests, will also sign an AIMS HS/AIMS DPA/*TerraNova* Test Security Agreement.

SIGNED BY: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

DISTRICT NAME/  
CHARTER OPERATOR: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_

FAX Superintendent/Charter Holder signature to: 602-542-5467 DUE FEBRUARY 5, 2007

## **Part 6: Data for Operational Analysis**

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Part 6 of the technical report describes the data that were used for calibration and scaling of the 2007 Spring AIMS. This part also presents classical test statistics and item analysis statistics for each content area and grade level (CRT and NRT) computed with the data used for calibration and scaling. Addressed in this part of the technical report are the following AERA/APA/NCME standards: 1.5, 1.13, 2.4, 2.8, 3.18, 6.5, and 7.1. (See Appendix A for this information for the 2006 Fall AIMS administration.)

### **6.1 Data**

Arizona had two test windows for operational testing in spring 2007. The high school reading and writing tests were administered on February 27 and 28. High school math and grades 3-8 reading, writing, and math were administered between April 9 and April 20. Live calibration with census data was used for operational analysis of reading and mathematics tests; pre-equated scoring tables were used for analysis of writing tests. (See Appendix C for details on the development of these pre-equated scoring tables.)

### **6.2 Ensuring Valid Records in Calibration Sample**

In order to ensure valid calibration results, several data cleaning steps occurred upon receipt of raw data from the scanning and scoring processes. These steps allowed for calibration to be conducted on valid student responses at the targeted grade level. Records for students taking all forms of the tests were included.

The cleaning process removed the following records from the calibration datasets for each content area and grade level:

- Records with invalid tests noted by a special invalidation code obtained from ADE and marked on the answer document;
- Records with non-valid attempts noted by less than one response in any of the test sessions;
- Records for Bureau of Indian Affairs schools, juvenile corrections centers, state hospital schools, private schools, and home schools;
- Records where a student indicated they had already met expectations (high school tests only);
- Records for students in cohorts other than 09 (high school tests only);
- Records which indicated the student took a test other than their grade level test;
- Records marked as taken with alternate accommodations; and
- Duplicate records (score sheets were double scanned or students taking the test more than one time).

More details on calibration are included in Part 7 Calibration and Scaling.

### 6.3 Descriptive Statistics by Test

Table 6.3.1 presents descriptive statistics by test (content area and grade level) which are computed with the calibration samples in reading, mathematics, and census data in writing. In the table it shows the number of students (N), the maximum obtained raw score (Max RS), the raw score mean (RS M), the raw score standard deviation (RS SD), the average p-value (P-value M), the average item to total correlation ( $r$  M), and Cronbach's alpha as a measure of internal consistency. The item to total correlation is computed as a point biserial correlation for dichotomous items and as a Pearson product-moment correlation for polytomous items. The point biserial correlation reported is the point biserial of the item and sum of other items. The Pearson product-moment correlation reported is the Pearson product-moment correlation of the item and sum of other items.

Note that internal consistency is not reported for the writing tests. This is because, although Cronbach's alpha could be used as a measure of internal consistency for the 2007 Spring AIMS CRT writing tests, this measure would likely overestimate the coefficient because the trait scores are based on the same response. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability for a single prompt test. Therefore, measures of internal consistency for the AIMS writing tests are not reported.

**Table 6.3.1**  
**2007 Spring AIMS Classical Test Analysis Statistics**

Test	N	Max RS Obtained	RS M	RS SD	P-value M	r M	Internal Consistency
<b>CRT</b>							
Math							
03	81252	72	50.07	13.05	0.70	0.39	0.93
04	80644	70	50.33	13.29	0.72	0.42	0.94
05	81165	68	47.08	13.50	0.69	0.42	0.94
06	79987	68	47.15	13.69	0.69	0.43	0.94
07	80100	68	47.44	13.35	0.70	0.42	0.94
08	78596	66	43.53	13.12	0.66	0.42	0.94
HS	68628	84	55.28	16.67	0.66	0.42	0.95
Reading							
03	80952	54	36.34	10.75	0.67	0.42	0.92
04	80418	54	37.99	11.50	0.70	0.46	0.94
05	80999	54	36.25	10.61	0.67	0.40	0.92
06	80036	54	36.28	10.55	0.67	0.41	0.92
07	80414	54	35.93	11.09	0.67	0.42	0.92
08	78938	54	35.46	10.53	0.66	0.39	0.91
HS	73458	54	36.34	10.45	0.67	0.40	0.92
Writing							
03	77211	36	21.87	5.12	0.58	0.85	
04	77173	36	20.96	5.06	0.56	0.85	
05	79006	36	20.76	4.82	0.57	0.83	
06	76917	36	19.41	4.09	0.52	0.79	
07	78685	36	20.56	5.01	0.56	0.84	
08	77341	36	21.55	4.64	0.59	0.84	
HS-A	70797	72	43.85	8.33	0.60	0.87	
HS-T	1953	72	39.80	9.38	0.52	0.90	
<b>NRT</b>							
Math							
03	81252	25	18.44	4.36	0.74	0.35	0.81
04	80644	25	18.17	4.77	0.73	0.38	0.84
05	81165	25	17.35	5.18	0.69	0.40	0.85
06	79987	25	17.08	5.51	0.68	0.42	0.87
07	80100	25	14.91	5.42	0.60	0.40	0.85
08	78596	25	15.71	5.09	0.63	0.37	0.83
Reading							
03	80952	25	16.11	5.04	0.64	0.37	0.83
04	80418	25	17.78	5.30	0.71	0.43	0.87
05	80999	25	16.80	4.97	0.67	0.38	0.83
06	80036	25	17.30	4.89	0.69	0.38	0.83
07	80414	25	15.75	5.70	0.63	0.42	0.87
08	78938	25	17.52	4.85	0.70	0.37	0.83

Note. CRT= Criterion-referenced test, NRT= Norm-referenced test, HS-A= High School Prompt A, HS-T= High School Prompt T. High school writing tests have a maximum raw score of 72 because 6 traits were scored by two raters each, treated in analysis as 12 6-point items. The statistics presented in this table are based on a calibration sample, which was near census for this administration. Point-biserial correlation was used to compute item-total correlation for all tests but writing. Pearson product-moment correlation was used to compute item-total correlation for the writing tests.

(table continues)

**Table 6.3.1 (continued)**  
**2007 Spring AIMS Classical Test Analysis Statistics**

Test	N	Max RS Obtained	RS M	RS SD	P-value M	r M	Internal Consistency
<b>NRT</b>							
Language							
03	80952	20	12.74	3.98	0.64	0.29	0.79
04	80418	20	13.31	4.05	0.67	0.29	0.79
05	80999	20	12.64	4.67	0.63	0.31	0.84
06	80036	20	12.72	4.46	0.64	0.29	0.82
07	80414	20	13.44	4.26	0.67	0.30	0.81
08	78938	20	12.81	4.04	0.64	0.28	0.80

Note. CRT= Criterion-referenced test, NRT= Norm-referenced test, HS-A= High School Prompt A, HS-T= High School Prompt T. High school writing tests have a maximum raw score of 72 because 6 traits were scored by two raters each, treated in analysis as 12 6-point items. The statistics presented in this table are based on a calibration sample, which was near census for this administration. Point-biserial correlation was used to compute item-total correlation for all tests but writing. Pearson product-moment correlation was used to compute item-total correlation for the writing tests.

#### 6.4 Classical Item Analysis

Classical item analysis was conducted for all grades and content areas. Tables 6.4.1—6.4.22 presents item statistics for the CRT tests. Note that operational CRT items are reported in sequence without embedded field test and non-dual purpose NRT/CRT items. Tables 6.4.23—6.4.40 presents item statistics for the NRT tests. The tables show the number of students (N), the item difficulty (P-Value), point biserial ( $r_{pb}$ ) for dichotomous items, item to total Pearson product-moment correlation ( $r$ ) for polytomous items, percentage of students who omitted the item (% Omit), and the percentage of students responding to and point biserial for the key and each distractor. The point biserial correlation ( $r_{pb}$ ) reported is the point biserial correlation of the item and sum of other items. The item to total Pearson product-moment correlation reported is the Pearson product moment correlation of the item and sum of other items.

**Table 6.4.1**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 3**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	81252	0.75	0.34	0.30	75.48		7.68	-0.16	10.42	-0.16	6.11	-0.22
2	81252	0.85	0.26	0.12	84.57		12.14	-0.18	1.45	-0.13	1.72	-0.14
3	81252	0.86	0.40	0.17	86.22		2.60	-0.22	2.20	-0.21	8.79	-0.25
4	81252	0.77	0.29	0.15	77.43		1.07	-0.15	20.15	-0.21	1.18	-0.17
5	81252	0.83	0.49	0.50	83.38		8.15	-0.34	4.20	-0.22	3.77	-0.24
6	81252	0.66	0.36	0.62	65.65		7.39	-0.27	23.53	-0.14	2.81	-0.22
7	81252	0.99	0.16	0.15	98.88		0.25	-0.08	0.33	-0.09	0.38	-0.10
8	81252	0.68	0.36	0.29	68.38		9.43	-0.23	13.41	-0.20	8.47	-0.12
9	81252	0.71	0.50	0.76	70.80		7.47	-0.27	7.59	-0.26	13.36	-0.25
10	81252	0.57	0.45	0.40	57.12		18.47	-0.20	12.03	-0.26	11.97	-0.17
11	81252	0.72	0.38	0.35	72.29		8.51	-0.25	12.82	-0.14	6.01	-0.22
12	81252	0.64	0.35	1.05	63.87		20.33	-0.20	9.74	-0.11	4.20	-0.19
13	81252	0.74	0.45	0.70	74.11		15.80	-0.35	7.79	-0.17	1.59	-0.15
14	81252	0.77	0.39	0.53	77.01		1.59	-0.19	14.74	-0.16	6.11	-0.33
15	81252	0.47	0.31	1.01	46.85		21.71	-0.10	15.99	-0.20	14.40	-0.09
16	81252	0.85	0.32	0.58	84.65		1.91	-0.14	8.98	-0.21	3.85	-0.18
17	81252	0.95	0.26	0.37	95.23		1.90	-0.17	1.29	-0.14	1.14	-0.14
18	81252	0.83	0.39	0.44	82.92		9.88	-0.29	3.06	-0.21	3.69	-0.12
19	81252	0.74	0.48	0.89	73.57		11.22	-0.30	10.18	-0.26	4.12	-0.17
20	81252	0.60	0.46	0.34	60.02		2.75	-0.09	7.55	-0.11	29.22	-0.39
21	81252	0.58	0.60	0.47	57.87		28.28	-0.53	8.72	-0.22	4.61	0.02
22	81252	0.77	0.55	0.35	76.62		8.15	-0.25	8.90	-0.34	5.96	-0.28
23	81252	0.68	0.28	0.35	68.36		15.32	-0.14	7.51	-0.09	4.69	-0.16
24	81252	0.59	0.46	0.43	59.22		17.60	-0.22	9.78	-0.24	12.95	-0.20
25	81252	0.76	0.53	0.10	76.42		2.08	-0.21	18.04	-0.38	3.35	-0.26
26	81252	0.86	0.47	0.37	85.87		6.16	-0.33	4.19	-0.20	3.41	-0.25
27	81252	0.94	0.35	1.02	93.54		1.50	-0.18	1.48	-0.21	2.46	-0.23
28	81252	0.83	0.28	0.12	83.14		1.08	-0.18	13.41	-0.16	2.24	-0.23
29	81252	0.66	0.22	0.24	65.65		9.19	-0.19	13.54	-0.07	11.34	-0.07
30	81252	0.53	0.34	0.47	52.92		14.07	-0.09	17.02	-0.21	15.51	-0.17
31	81252	0.83	0.30	0.37	83.37		9.21	-0.18	4.58	-0.17	2.46	-0.14
32	81252	0.38	0.29	0.31	38.29		25.53	0.09	33.75	-0.34	2.11	-0.14
33	81252	0.84	0.37	0.27	83.95		6.23	-0.18	2.21	-0.20	7.31	-0.24
34	81252	0.63	0.46	0.51	62.85		13.51	-0.21	9.70	-0.18	13.41	-0.28
35	81252	0.76	0.36	0.52	75.85		5.88	-0.12	3.17	-0.21	14.57	-0.25
36	81252	0.67	0.51	0.90	66.64		8.68	-0.25	8.11	-0.28	15.65	-0.24
37	81252	0.56	0.51	2.10	55.58		11.27	-0.23	27.75	-0.33	3.29	-0.16
38	81252	0.76	0.44	2.22	75.63		6.04	-0.20	5.04	-0.25	11.06	-0.26
39	81252	0.53	0.27	0.50	52.92		5.78	-0.26	9.06	-0.24	31.71	0.00
40	81252	0.44	0.33	0.31	44.34		22.06	-0.13	14.10	-0.11	19.16	-0.18

**Note.** Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.1 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 3**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	81252	0.46	0.42	0.36	45.88	28.98	-0.24	11.82	-0.08	12.95	-0.22	
42	81252	0.86	0.49	0.28	86.30	5.38	-0.31	4.31	-0.25	3.71	-0.23	
43	81252	0.77	0.37	0.28	77.41	6.54	-0.21	10.53	-0.18	5.23	-0.21	
44	81252	0.50	0.38	0.44	49.54	35.93	-0.12	10.17	-0.37	3.92	-0.09	
45	81252	0.85	0.29	0.63	85.16	7.19	-0.17	4.15	-0.14	2.84	-0.18	
46	81252	0.84	0.45	0.34	83.77	6.30	-0.24	4.23	-0.26	5.35	-0.23	
47	81252	0.75	0.45	0.67	74.88	5.13	-0.28	9.15	-0.22	10.13	-0.23	
48	81252	0.89	0.40	0.10	89.35	3.21	-0.25	5.68	-0.24	1.66	-0.17	
49	81252	0.56	0.39	0.13	56.41	8.77	-0.26	25.10	-0.13	9.59	-0.22	
50	81252	0.64	0.30	0.13	63.79	15.81	-0.13	11.91	-0.16	7.68	-0.13	
51	81252	0.88	0.19	0.24	88.21	2.37	-0.13	6.55	-0.09	2.58	-0.10	
52	81252	0.66	0.42	0.57	65.59	17.34	-0.16	10.52	-0.25	5.97	-0.23	
53	81252	0.52	0.36	0.28	51.93	19.20	-0.07	11.52	-0.19	17.06	-0.23	
54	81252	0.65	0.46	0.69	64.55	11.05	-0.24	12.75	-0.15	10.94	-0.29	
55	81252	0.72	0.40	0.87	71.55	4.65	-0.23	14.49	-0.22	8.42	-0.20	
56	81252	0.50	0.47	0.42	50.22	14.33	-0.24	12.91	-0.22	22.09	-0.18	
57	81252	0.79	0.53	1.27	78.56	10.59	-0.38	1.70	-0.19	7.87	-0.28	
58	81252	0.56	0.40	0.30	55.51	13.75	-0.21	23.93	-0.18	6.49	-0.21	
59	81252	0.85	0.38	0.48	85.22	4.93	-0.24	5.74	-0.20	3.62	-0.17	
60	81252	0.75	0.52	1.91	75.42	8.03	-0.28	8.26	-0.24	6.33	-0.26	
61	81252	0.69	0.44	0.84	68.71	15.74	-0.27	1.43	-0.14	13.27	-0.26	
62	81252	0.60	0.45	1.04	59.63	8.19	-0.28	18.87	-0.22	12.26	-0.15	
63	81252	0.52	0.40	0.82	51.70	11.82	-0.19	14.96	-0.27	20.69	-0.09	
64	81252	0.88	0.41	1.01	87.74	2.36	-0.21	4.70	-0.22	4.19	-0.26	
65	81252	0.79	0.44	0.21	78.54	7.82	-0.26	7.16	-0.27	6.27	-0.18	
66	81252	0.45	0.31	0.39	44.98	14.42	-0.22	6.70	-0.17	33.42	-0.07	
67	81252	0.41	0.38	0.55	41.48	16.78	-0.23	9.48	-0.31	31.72	-0.01	
68	81252	0.70	0.39	0.20	70.18	7.60	-0.16	14.40	-0.26	7.54	-0.16	
69	81252	0.77	0.29	0.30	76.92	19.18	-0.16	1.72	-0.18	1.82	-0.23	
70	81252	0.75	0.44	1.03	75.20	12.73	-0.23	7.76	-0.25	3.26	-0.23	
71	81252	0.40	0.36	0.22	39.57	10.06	-0.22	31.83	-0.15	18.13	-0.10	
72	81252	0.56	0.29	0.40	55.74	16.07	0.07	5.31	-0.15	22.47	-0.32	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.2**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 4**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80644	0.74	0.51	0.02	74.01	21.06	-0.39	3.11	-0.24	1.80	-0.17	
2	80644	0.72	0.34	0.04	72.17	15.74	-0.29	6.82	-0.07	5.21	-0.13	
3	80644	0.90	0.26	0.05	90.16	4.19	-0.13	3.38	-0.14	2.20	-0.18	
4	80644	0.79	0.49	0.10	79.02	7.33	-0.24	5.26	-0.22	8.28	-0.32	
5	80644	0.64	0.35	0.04	63.92	25.01	-0.20	5.76	-0.16	5.26	-0.18	
6	80644	0.86	0.44	0.05	85.86	5.89	-0.23	4.97	-0.25	3.22	-0.25	
7	80644	0.62	0.44	0.08	61.56	20.83	-0.26	7.28	-0.20	10.22	-0.18	
8	80644	0.86	0.37	0.05	86.41	1.42	-0.19	3.28	-0.24	8.82	-0.22	
9	80644	0.58	0.41	0.07	58.47	14.94	-0.20	18.82	-0.22	7.68	-0.17	
10	80644	0.83	0.50	0.09	82.82	6.99	-0.27	5.09	-0.26	4.99	-0.28	
11	80644	0.84	0.58	0.04	83.77	5.86	-0.34	4.62	-0.28	5.71	-0.31	
12	80644	0.70	0.45	0.09	69.66	6.70	-0.19	7.83	-0.18	15.72	-0.30	
13	80644	0.71	0.37	0.08	70.87	7.62	-0.24	18.64	-0.17	2.77	-0.23	
14	80644	0.83	0.47	0.07	82.88	7.03	-0.28	4.77	-0.28	5.23	-0.21	
15	80644	0.66	0.37	0.07	66.06	6.67	-0.28	8.05	-0.25	19.14	-0.10	
16	80644	0.81	0.57	0.09	81.02	8.36	-0.39	4.84	-0.29	5.68	-0.24	
17	80644	0.61	0.38	0.09	60.88	31.23	-0.27	4.87	-0.15	2.92	-0.18	
18	80644	0.86	0.40	0.05	85.64	6.89	-0.20	3.41	-0.25	4.00	-0.23	
19	80644	0.60	0.42	0.07	60.43	9.07	-0.17	16.21	-0.21	14.20	-0.21	
20	80644	0.56	0.35	0.13	56.05	4.92	-0.24	9.50	-0.21	29.38	-0.12	
21	80644	0.66	0.49	0.11	66.07	14.01	-0.23	12.43	-0.24	7.36	-0.28	
22	80644	0.54	0.25	0.11	53.61	28.84	0.02	10.51	-0.27	6.92	-0.20	
23	80644	0.45	0.39	0.14	45.44	16.42	-0.09	35.12	-0.25	2.87	-0.24	
24	80644	0.80	0.22	0.14	79.55	1.45	-0.16	17.53	-0.14	1.33	-0.12	
25	80644	0.76	0.36	0.27	75.76	3.35	-0.11	4.88	-0.10	15.73	-0.31	
26	80644	0.85	0.33	0.03	84.74	4.57	-0.18	7.17	-0.19	3.48	-0.18	
27	80644	0.79	0.36	0.06	79.32	4.43	-0.22	11.58	-0.17	4.61	-0.21	
28	80644	0.75	0.52	0.04	75.40	10.84	-0.29	9.02	-0.26	4.67	-0.28	
29	80644	0.60	0.53	0.08	59.94	14.87	-0.11	13.56	-0.37	11.53	-0.29	
30	80644	0.87	0.47	0.17	86.71	3.95	-0.24	5.62	-0.29	3.54	-0.23	
31	80644	0.77	0.56	0.04	76.62	8.52	-0.26	11.97	-0.37	2.83	-0.26	
32	80644	0.76	0.46	0.11	76.19	2.89	-0.24	8.64	-0.23	12.15	-0.27	
33	80644	0.79	0.54	0.06	78.84	13.28	-0.40	3.83	-0.26	3.97	-0.16	
34	80644	0.79	0.47	0.09	78.53	4.55	-0.25	11.37	-0.27	5.43	-0.24	
35	80644	0.88	0.31	0.07	87.90	3.61	-0.17	5.52	-0.18	2.89	-0.15	
36	80644	0.94	0.35	0.12	93.52	1.98	-0.22	2.91	-0.19	1.46	-0.19	
37	80644	0.84	0.47	0.04	84.29	5.36	-0.29	4.74	-0.25	5.56	-0.22	
38	80644	0.70	0.39	0.08	70.31	3.21	-0.22	4.68	-0.25	21.71	-0.21	
39	80644	0.88	0.42	0.06	88.39	2.91	-0.22	3.47	-0.23	5.14	-0.25	
40	80644	0.57	0.31	0.04	57.28	7.31	-0.23	5.37	-0.20	29.97	-0.11	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.2 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80644	0.45	0.29	0.11	45.10	20.59	-0.20	18.62	-0.12	15.56	-0.05	
42	80644	0.81	0.35	0.09	81.10	5.09	-0.28	10.96	-0.14	2.75	-0.20	
43	80644	0.67	0.46	0.09	67.36	5.37	-0.21	14.28	-0.15	12.89	-0.35	
44	80644	0.70	0.53	0.17	69.71	12.38	-0.31	12.97	-0.32	4.76	-0.14	
45	80644	0.62	0.50	0.11	61.93	24.88	-0.38	6.76	-0.15	6.28	-0.16	
46	80644	0.72	0.44	0.12	72.45	16.34	-0.23	7.05	-0.23	4.02	-0.26	
47	80644	0.53	0.41	0.19	52.65	11.33	-0.13	15.77	-0.07	20.02	-0.34	
48	80644	0.62	0.55	0.36	61.51	11.91	-0.27	11.34	-0.21	14.88	-0.31	
49	80644	0.81	0.22	0.03	80.93	5.90	-0.10	7.07	-0.13	6.06	-0.13	
50	80644	0.72	0.27	0.02	71.75	1.02	-0.16	1.81	-0.18	25.39	-0.18	
51	80644	0.74	0.40	0.06	74.06	6.23	-0.26	9.06	-0.31	10.57	-0.08	
52	80644	0.85	0.32	0.09	85.38	2.71	-0.21	7.62	-0.14	4.19	-0.21	
53	80644	0.74	0.40	0.12	73.98	10.24	-0.20	8.14	-0.19	7.49	-0.22	
54	80644	0.75	0.63	0.02	74.91	13.70	-0.43	5.65	-0.28	5.70	-0.26	
55	80644	0.86	0.40	0.06	86.10	2.28	-0.24	8.69	-0.23	2.86	-0.21	
56	80644	0.73	0.51	0.08	73.44	13.47	-0.32	6.92	-0.26	6.08	-0.20	
57	80644	0.75	0.55	0.06	75.40	10.38	-0.35	6.40	-0.32	7.73	-0.20	
58	80644	0.61	0.48	0.09	61.22	10.10	-0.32	6.95	-0.27	21.60	-0.17	
59	80644	0.67	0.45	0.09	67.41	12.91	-0.26	4.32	-0.25	15.26	-0.20	
60	80644	0.51	0.34	0.05	50.59	22.75	-0.10	10.03	-0.18	16.57	-0.19	
61	80644	0.71	0.45	0.11	70.79	11.60	-0.18	11.06	-0.30	6.41	-0.21	
62	80644	0.90	0.32	0.07	90.36	3.42	-0.20	3.50	-0.16	2.61	-0.17	
63	80644	0.55	0.48	0.09	54.86	12.61	-0.23	22.82	-0.20	9.60	-0.27	
64	80644	0.79	0.38	0.08	78.88	14.10	-0.21	4.16	-0.22	2.74	-0.21	
65	80644	0.57	0.41	0.11	57.12	13.89	-0.13	19.39	-0.22	9.48	-0.25	
66	80644	0.60	0.42	0.06	60.12	20.58	-0.24	15.24	-0.17	3.97	-0.23	
67	80644	0.90	0.38	0.10	89.97	3.04	-0.20	4.16	-0.21	2.69	-0.21	
68	80644	0.59	0.20	0.12	59.14	2.50	-0.22	5.02	-0.19	33.18	-0.05	
69	80644	0.68	0.43	0.33	67.50	5.69	-0.24	5.96	-0.25	20.49	-0.21	
70	80644	0.47	0.41	0.49	47.06	32.03	-0.23	9.90	-0.14	10.51	-0.16	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.3**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	81165	0.69	0.32	0.07	68.95	14.59	-0.24	2.57	-0.20	13.82	-0.09	
2	81165	0.65	0.22	0.05	64.90	10.92	-0.11	19.01	-0.14	5.12	-0.08	
3	81165	0.59	0.34	0.04	59.18	5.20	-0.14	31.62	-0.22	3.96	-0.16	
4	81165	0.85	0.42	0.08	84.51	4.73	-0.24	5.07	-0.22	5.61	-0.23	
5	81165	0.77	0.44	0.03	77.38	3.72	-0.26	11.86	-0.23	7.01	-0.25	
6	81165	0.86	0.47	0.06	86.37	4.82	-0.28	4.59	-0.28	4.15	-0.21	
7	81165	0.65	0.45	0.06	64.68	7.28	-0.25	12.28	-0.14	15.69	-0.28	
8	81165	0.86	0.29	0.04	86.41	5.33	-0.17	6.17	-0.17	2.05	-0.14	
9	81165	0.70	0.47	0.10	70.15	9.62	-0.27	8.73	-0.25	11.39	-0.20	
10	81165	0.70	0.36	0.07	69.76	2.93	-0.24	13.66	-0.21	13.57	-0.14	
11	81165	0.83	0.27	0.08	83.27	7.52	-0.13	5.04	-0.16	4.09	-0.16	
12	81165	0.78	0.38	0.07	77.74	9.96	-0.18	7.88	-0.18	4.34	-0.26	
13	81165	0.80	0.40	0.05	80.46	8.50	-0.18	6.28	-0.23	4.69	-0.26	
14	81165	0.63	0.42	0.07	62.67	10.67	-0.21	13.58	-0.15	13.00	-0.25	
15	81165	0.67	0.40	0.10	66.70	11.65	-0.30	12.75	-0.08	8.78	-0.23	
16	81165	0.68	0.56	0.06	67.62	10.35	-0.31	14.51	-0.36	7.44	-0.17	
17	81165	0.88	0.43	0.08	88.33	2.83	-0.24	4.83	-0.25	3.92	-0.23	
18	81165	0.75	0.39	0.08	75.11	20.46	-0.28	2.88	-0.19	1.45	-0.19	
19	81165	0.57	0.43	0.20	56.57	15.45	-0.22	8.39	-0.20	19.39	-0.19	
20	81165	0.69	0.35	0.06	69.10	14.24	-0.20	9.00	-0.20	7.58	-0.12	
21	81165	0.76	0.39	0.06	76.11	11.91	-0.20	8.15	-0.24	3.76	-0.20	
22	81165	0.80	0.55	0.04	79.80	10.19	-0.38	4.80	-0.26	5.16	-0.22	
23	81165	0.76	0.39	0.05	76.23	7.92	-0.15	6.83	-0.22	8.97	-0.25	
24	81165	0.72	0.58	0.01	71.71	8.15	-0.30	4.14	-0.22	15.99	-0.36	
25	81165	0.58	0.48	0.02	58.36	12.73	-0.12	22.02	-0.38	6.87	-0.16	
26	81165	0.83	0.43	0.02	82.92	3.44	-0.24	11.20	-0.25	2.41	-0.25	
27	81165	0.80	0.55	0.05	80.23	7.55	-0.29	7.57	-0.29	4.59	-0.31	
28	81165	0.92	0.24	0.04	91.79	2.29	-0.12	3.59	-0.14	2.29	-0.15	
29	81165	0.66	0.35	0.05	65.92	6.32	-0.24	10.80	-0.13	16.90	-0.18	
30	81165	0.64	0.41	0.07	64.04	9.52	-0.27	7.52	-0.25	18.84	-0.14	
31	81165	0.66	0.38	0.05	66.27	9.50	-0.26	15.08	-0.09	9.09	-0.25	
32	81165	0.42	0.38	0.08	41.78	15.98	-0.12	28.41	-0.19	13.74	-0.16	
33	81165	0.58	0.32	0.09	58.33	28.75	-0.05	4.46	-0.27	8.35	-0.28	
34	81165	0.48	0.35	0.04	47.79	22.64	-0.17	21.15	-0.20	8.36	-0.09	
35	81165	0.50	0.41	0.10	50.45	18.08	-0.24	20.49	-0.18	10.87	-0.12	
36	81165	0.87	0.46	0.07	87.18	4.38	-0.25	4.53	-0.27	3.83	-0.24	
37	81165	0.81	0.52	0.08	80.59	7.33	-0.28	6.08	-0.22	5.89	-0.33	
38	81165	0.72	0.47	0.15	71.86	5.54	-0.22	11.12	-0.24	11.33	-0.26	
39	81165	0.47	0.50	0.05	47.34	25.61	-0.20	19.37	-0.26	7.62	-0.21	
40	81165	0.64	0.51	0.08	64.16	13.69	-0.36	13.83	-0.22	8.23	-0.16	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.3 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	81165	0.78	0.45	0.08	78.32	2.99	-0.21	13.91	-0.28	4.69	-0.25	
42	81165	0.61	0.47	0.11	60.95	23.87	-0.24	7.92	-0.25	7.15	-0.23	
43	81165	0.85	0.45	0.01	85.32	4.45	-0.25	4.99	-0.24	5.21	-0.26	
44	81165	0.76	0.41	0.02	76.31	15.94	-0.22	4.24	-0.25	3.48	-0.22	
45	81165	0.56	0.44	0.05	55.65	18.12	-0.09	17.92	-0.33	8.23	-0.20	
46	81165	0.59	0.36	0.05	59.04	14.98	-0.23	13.93	-0.15	11.98	-0.14	
47	81165	0.75	0.50	0.03	75.31	10.42	-0.28	8.04	-0.26	6.19	-0.25	
48	81165	0.58	0.40	0.06	58.25	13.77	-0.30	14.91	-0.19	13.00	-0.08	
49	81165	0.65	0.45	0.08	65.35	8.33	-0.14	6.21	-0.24	20.02	-0.29	
50	81165	0.88	0.37	0.02	87.57	4.86	-0.25	3.29	-0.19	4.25	-0.17	
51	81165	0.66	0.61	0.04	65.87	2.48	-0.22	15.28	-0.39	16.32	-0.31	
52	81165	0.54	0.42	0.10	53.85	7.51	-0.31	18.08	-0.31	20.45	-0.02	
53	81165	0.59	0.59	0.05	59.23	11.07	-0.16	24.49	-0.45	5.15	-0.21	
54	81165	0.61	0.42	0.07	61.21	26.76	-0.26	5.73	-0.22	6.21	-0.15	
55	81165	0.70	0.45	0.03	70.21	10.19	-0.22	14.46	-0.25	5.11	-0.25	
56	81165	0.63	0.37	0.05	63.25	18.90	-0.21	9.87	-0.21	7.92	-0.12	
57	81165	0.81	0.49	0.05	80.55	7.83	-0.22	8.89	-0.33	2.67	-0.24	
58	81165	0.92	0.40	0.06	91.60	3.22	-0.25	3.29	-0.21	1.82	-0.20	
59	81165	0.62	0.38	0.07	62.13	12.52	-0.06	15.20	-0.29	10.07	-0.19	
60	81165	0.85	0.43	0.03	85.22	3.84	-0.23	4.71	-0.27	6.19	-0.20	
61	81165	0.77	0.45	0.07	76.92	4.96	-0.25	12.86	-0.24	5.17	-0.25	
62	81165	0.57	0.36	0.06	57.22	17.71	-0.24	13.88	-0.11	11.11	-0.15	
63	81165	0.62	0.42	0.09	61.55	17.02	-0.17	12.27	-0.28	9.05	-0.17	
64	81165	0.41	0.38	0.11	40.54	10.38	-0.19	31.99	-0.07	16.97	-0.25	
65	81165	0.76	0.56	0.06	75.81	8.16	-0.29	5.03	-0.28	10.92	-0.32	
66	81165	0.60	0.38	0.15	59.90	20.84	-0.17	10.59	-0.23	8.50	-0.16	
67	81165	0.59	0.39	0.09	58.76	6.52	-0.18	13.70	-0.18	20.89	-0.21	
68	81165	0.59	0.41	0.21	59.37	13.36	-0.19	11.97	-0.18	15.08	-0.22	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.4**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 6**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	79987	0.92	0.31	0.02	92.24	1.66	-0.15	3.69	-0.19	2.39	-0.19	
2	79987	0.51	0.52	0.07	51.47	34.21	-0.33	6.70	-0.25	7.54	-0.15	
3	79987	0.81	0.27	0.11	80.52	14.85	-0.18	2.17	-0.15	2.35	-0.12	
4	79987	0.57	0.32	0.05	57.13	18.31	-0.08	11.49	-0.20	13.01	-0.19	
5	79987	0.81	0.40	0.04	80.66	7.65	-0.25	3.68	-0.19	7.96	-0.20	
6	79987	0.92	0.32	0.02	91.67	4.27	-0.20	2.48	-0.17	1.55	-0.18	
7	79987	0.62	0.51	0.06	62.25	3.62	-0.17	31.35	-0.40	2.71	-0.17	
8	79987	0.66	0.49	0.02	66.34	16.03	-0.33	3.16	-0.13	14.45	-0.25	
9	79987	0.31	0.34	0.07	30.99	17.98	-0.37	11.17	-0.24	39.79	0.13	
10	79987	0.75	0.33	0.04	74.61	8.15	-0.16	8.08	-0.12	9.11	-0.22	
11	79987	0.77	0.48	0.05	76.64	8.25	-0.28	7.50	-0.27	7.56	-0.21	
12	79987	0.74	0.46	0.05	73.87	6.21	-0.21	10.60	-0.31	9.25	-0.19	
13	79987	0.83	0.42	0.06	83.00	6.06	-0.24	5.15	-0.18	5.72	-0.25	
14	79987	0.65	0.57	0.05	65.02	12.09	-0.23	12.79	-0.33	10.03	-0.28	
15	79987	0.70	0.40	0.07	70.00	8.26	-0.25	6.57	-0.26	15.09	-0.14	
16	79987	0.62	0.50	0.06	61.82	5.93	-0.32	22.12	-0.23	10.05	-0.23	
17	79987	0.64	0.50	0.10	64.38	16.13	-0.26	12.06	-0.23	7.32	-0.27	
18	79987	0.62	0.47	0.12	61.98	13.88	-0.21	16.97	-0.26	7.04	-0.21	
19	79987	0.66	0.50	0.06	65.57	27.45	-0.36	4.47	-0.25	2.45	-0.15	
20	79987	0.59	0.41	0.12	59.35	15.05	-0.20	11.99	-0.18	13.48	-0.21	
21	79987	0.80	0.50	0.06	79.82	6.56	-0.31	8.50	-0.29	5.05	-0.19	
22	79987	0.93	0.34	0.01	93.21	1.07	-0.12	1.21	-0.17	4.49	-0.27	
23	79987	0.77	0.26	0.05	76.73	5.33	-0.26	4.98	-0.20	12.89	-0.02	
24	79987	0.77	0.39	0.07	76.66	6.70	-0.20	5.16	-0.20	11.40	-0.22	
25	79987	0.76	0.47	0.01	76.36	3.38	-0.22	5.51	-0.23	14.74	-0.30	
26	79987	0.80	0.45	0.04	79.75	1.78	-0.18	5.32	-0.20	13.10	-0.34	
27	79987	0.73	0.46	0.04	73.03	9.21	-0.34	9.04	-0.18	8.66	-0.19	
28	79987	0.70	0.33	0.02	70.30	1.40	-0.17	25.07	-0.22	3.20	-0.20	
29	79987	0.68	0.45	0.08	67.82	10.94	-0.19	5.90	-0.27	15.24	-0.24	
30	79987	0.76	0.51	0.02	75.76	11.36	-0.30	6.83	-0.29	6.01	-0.21	
31	79987	0.77	0.38	0.05	77.20	6.41	-0.26	12.02	-0.14	4.32	-0.24	
32	79987	0.94	0.31	0.03	94.41	1.99	-0.19	2.36	-0.18	1.20	-0.16	
33	79987	0.65	0.47	0.07	65.30	8.44	-0.22	17.38	-0.21	8.80	-0.30	
34	79987	0.74	0.43	0.04	73.73	9.29	-0.22	5.45	-0.21	11.49	-0.25	
35	79987	0.49	0.34	0.06	49.21	20.72	-0.18	20.24	-0.11	9.75	-0.16	
36	79987	0.69	0.50	0.04	68.59	13.94	-0.20	9.20	-0.30	8.22	-0.28	
37	79987	0.80	0.49	0.06	79.77	4.95	-0.27	8.19	-0.29	7.02	-0.23	
38	79987	0.74	0.54	0.04	73.75	9.35	-0.31	10.32	-0.29	6.53	-0.24	
39	79987	0.62	0.46	0.05	62.20	8.80	-0.33	22.68	-0.24	6.27	-0.12	
40	79987	0.60	0.33	0.05	60.01	13.71	-0.20	19.09	-0.13	7.13	-0.16	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.4 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 6**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	79987	0.85	0.23	0.04	85.44	8.79	-0.12	3.15	-0.14	2.59	-0.15	
42	79987	0.28	0.45	0.03	28.00	58.31	-0.34	5.32	-0.06	8.33	-0.06	
43	79987	0.69	0.56	0.02	69.40	11.92	-0.35	16.11	-0.28	2.54	-0.25	
44	79987	0.62	0.35	0.08	61.93	15.84	-0.10	10.89	-0.19	11.25	-0.23	
45	79987	0.70	0.58	0.01	69.50	11.17	-0.30	5.05	-0.24	14.26	-0.35	
46	79987	0.64	0.43	0.04	63.54	10.46	-0.32	20.95	-0.20	5.00	-0.14	
47	79987	0.77	0.55	0.06	76.70	6.75	-0.23	6.70	-0.30	9.78	-0.34	
48	79987	0.55	0.43	0.06	54.79	24.28	-0.28	10.51	-0.13	10.35	-0.18	
49	79987	0.86	0.44	0.09	85.90	4.83	-0.22	6.19	-0.27	3.00	-0.24	
50	79987	0.49	0.31	0.02	48.91	13.03	-0.27	7.89	-0.30	30.14	0.03	
51	79987	0.73	0.43	0.03	73.08	13.47	-0.27	5.14	-0.23	8.27	-0.18	
52	79987	0.63	0.37	0.03	62.62	3.20	-0.21	28.66	-0.23	5.47	-0.17	
53	79987	0.69	0.37	0.03	69.16	8.51	-0.13	19.30	-0.29	2.99	-0.13	
54	79987	0.60	0.45	0.04	60.21	7.90	-0.19	22.98	-0.29	8.87	-0.16	
55	79987	0.84	0.29	0.03	84.26	9.96	-0.12	3.14	-0.21	2.59	-0.21	
56	79987	0.75	0.40	0.03	74.75	14.77	-0.20	4.23	-0.23	6.21	-0.23	
57	79987	0.66	0.53	0.06	66.42	12.89	-0.26	12.98	-0.28	7.63	-0.26	
58	79987	0.70	0.45	0.05	70.07	13.96	-0.23	10.47	-0.23	5.45	-0.23	
59	79987	0.74	0.50	0.03	74.02	10.31	-0.28	8.86	-0.28	6.78	-0.22	
60	79987	0.76	0.45	0.03	75.69	8.43	-0.28	10.64	-0.23	5.20	-0.21	
61	79987	0.55	0.47	0.06	55.19	10.40	-0.27	13.87	-0.23	20.45	-0.17	
62	79987	0.65	0.45	0.06	64.84	6.53	-0.21	11.78	-0.23	16.75	-0.24	
63	79987	0.55	0.39	0.05	55.10	15.74	-0.20	13.18	-0.17	15.92	-0.17	
64	79987	0.65	0.47	0.04	64.51	20.90	-0.18	8.41	-0.33	6.15	-0.25	
65	79987	0.79	0.35	0.06	78.73	3.69	-0.17	5.75	-0.14	11.74	-0.24	
66	79987	0.51	0.44	0.07	50.69	29.78	-0.25	12.92	-0.19	6.51	-0.16	
67	79987	0.68	0.55	0.08	68.39	11.92	-0.23	10.50	-0.29	9.10	-0.32	
68	79987	0.80	0.45	0.10	80.38	3.86	-0.22	5.27	-0.21	10.39	-0.29	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.5**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 7**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80100	0.85	0.43	0.06	84.93	7.17	-0.24	3.83	-0.24	4.01	-0.24	
2	80100	0.53	0.33	0.10	53.48	17.01	-0.22	14.48	-0.21	14.92	-0.03	
3	80100	0.70	0.35	0.08	69.71	16.97	-0.07	5.30	-0.22	7.93	-0.31	
4	80100	0.79	0.40	0.08	78.93	5.25	-0.21	13.73	-0.25	2.00	-0.20	
5	80100	0.78	0.30	0.03	77.54	3.49	-0.21	5.71	-0.23	13.22	-0.10	
6	80100	0.72	0.43	0.04	71.77	17.50	-0.27	5.74	-0.25	4.94	-0.16	
7	80100	0.86	0.38	0.06	86.48	2.96	-0.18	7.54	-0.27	2.95	-0.16	
8	80100	0.70	0.41	0.04	69.94	5.26	-0.18	13.09	-0.19	11.66	-0.26	
9	80100	0.62	0.43	0.06	61.61	7.20	-0.18	23.88	-0.29	7.25	-0.13	
10	80100	0.77	0.41	0.05	77.27	11.84	-0.22	4.40	-0.23	6.41	-0.21	
11	80100	0.84	0.42	0.04	84.23	7.51	-0.22	5.88	-0.27	2.33	-0.21	
12	80100	0.57	0.53	0.07	56.68	7.41	-0.22	15.41	-0.29	20.42	-0.26	
13	80100	0.68	0.43	0.07	68.40	5.54	-0.25	7.47	-0.23	18.51	-0.21	
14	80100	0.48	0.32	0.07	47.54	11.61	-0.21	25.22	-0.07	15.55	-0.17	
15	80100	0.82	0.44	0.03	81.53	5.25	-0.26	6.53	-0.18	6.65	-0.27	
16	80100	0.81	0.43	0.05	81.11	10.71	-0.21	4.72	-0.28	3.40	-0.26	
17	80100	0.37	0.32	0.10	37.39	12.32	-0.19	31.72	-0.02	18.45	-0.21	
18	80100	0.55	0.42	0.06	54.55	11.05	-0.09	24.09	-0.20	10.23	-0.31	
19	80100	0.84	0.47	0.06	84.48	5.16	-0.32	4.88	-0.25	5.41	-0.20	
20	80100	0.75	0.50	0.12	75.05	8.96	-0.26	8.14	-0.29	7.74	-0.24	
21	80100	0.59	0.39	0.05	59.25	11.20	-0.23	14.16	-0.26	15.34	-0.08	
22	80100	0.74	0.49	0.07	73.65	9.72	-0.24	8.55	-0.28	8.00	-0.25	
23	80100	0.78	0.41	0.01	77.50	15.47	-0.17	2.03	-0.24	4.99	-0.35	
24	80100	0.64	0.50	0.08	64.28	9.28	-0.17	13.48	-0.22	12.87	-0.33	
25	80100	0.71	0.47	0.07	71.13	6.16	-0.32	11.67	-0.28	10.97	-0.15	
26	80100	0.86	0.42	0.03	85.92	6.81	-0.22	3.21	-0.26	4.02	-0.22	
27	80100	0.67	0.39	0.04	67.44	13.94	-0.19	6.22	-0.21	12.36	-0.20	
28	80100	0.78	0.46	0.04	78.29	8.88	-0.18	5.74	-0.28	7.04	-0.28	
29	80100	0.88	0.48	0.04	87.54	4.27	-0.26	5.90	-0.29	2.23	-0.25	
30	80100	0.60	0.51	0.15	59.87	24.02	-0.31	11.22	-0.23	4.73	-0.19	
31	80100	0.82	0.40	0.03	81.76	8.39	-0.25	5.92	-0.23	3.89	-0.17	
32	80100	0.66	0.46	0.07	66.10	6.72	-0.27	11.48	-0.30	15.63	-0.15	
33	80100	0.76	0.51	0.07	76.23	7.61	-0.25	6.95	-0.30	9.13	-0.25	
34	80100	0.78	0.31	0.07	77.99	3.60	-0.19	1.83	-0.19	16.51	-0.18	
35	80100	0.80	0.43	0.03	80.02	10.40	-0.23	5.75	-0.20	3.81	-0.28	
36	80100	0.69	0.45	0.07	69.02	7.39	-0.14	13.85	-0.24	9.66	-0.30	
37	80100	0.70	0.50	0.07	70.21	11.05	-0.25	13.47	-0.28	5.19	-0.24	
38	80100	0.81	0.52	0.06	81.47	7.99	-0.30	6.28	-0.28	4.19	-0.26	
39	80100	0.71	0.48	0.09	70.87	12.85	-0.28	7.21	-0.27	8.96	-0.18	
40	80100	0.38	0.40	0.06	37.61	25.65	-0.18	21.37	-0.19	15.30	-0.10	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.5 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 7**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80100	0.70	0.56	0.05	70.39	11.01	-0.29	10.43	-0.27	8.10	-0.30	
42	80100	0.67	0.40	0.06	66.51	16.64	-0.20	11.09	-0.20	5.68	-0.21	
43	80100	0.55	0.32	0.05	55.41	9.12	-0.21	9.48	-0.28	25.93	-0.04	
44	80100	0.36	0.29	0.06	35.86	6.97	-0.12	47.29	-0.14	9.81	-0.13	
45	80100	0.53	0.33	0.03	53.46	13.78	-0.21	26.67	-0.12	6.05	-0.16	
46	80100	0.42	0.25	0.09	41.92	36.90	-0.16	13.70	-0.17	7.39	0.04	
47	80100	0.76	0.43	0.04	75.67	10.86	-0.25	5.25	-0.27	8.16	-0.15	
48	80100	0.68	0.43	0.08	68.50	8.26	-0.20	16.90	-0.28	6.25	-0.16	
49	80100	0.89	0.43	0.04	89.21	3.37	-0.24	3.52	-0.23	3.85	-0.24	
50	80100	0.75	0.52	0.07	75.20	10.51	-0.21	8.95	-0.33	5.26	-0.28	
51	80100	0.78	0.57	0.04	78.07	12.61	-0.35	4.47	-0.28	4.81	-0.29	
52	80100	0.81	0.54	0.04	81.02	4.99	-0.34	4.32	-0.24	9.62	-0.29	
53	80100	0.88	0.36	0.04	87.84	3.04	-0.22	5.19	-0.20	3.88	-0.18	
54	80100	0.83	0.54	0.06	82.85	5.81	-0.31	4.87	-0.29	6.42	-0.28	
55	80100	0.81	0.43	0.05	81.15	3.95	-0.21	7.94	-0.27	6.91	-0.21	
56	80100	0.65	0.37	0.04	65.15	13.39	-0.18	14.19	-0.20	7.22	-0.17	
57	80100	0.78	0.45	0.04	78.03	16.71	-0.31	2.87	-0.23	2.34	-0.20	
58	80100	0.49	0.31	0.08	49.49	16.20	-0.18	15.87	-0.16	18.36	-0.08	
59	80100	0.64	0.40	0.08	64.28	4.65	-0.29	26.69	-0.18	4.29	-0.26	
60	80100	0.63	0.33	0.05	62.64	10.88	-0.19	10.39	-0.23	16.04	-0.08	
61	80100	0.51	0.39	0.06	50.67	11.03	-0.28	13.91	-0.24	24.31	-0.06	
62	80100	0.78	0.47	0.07	77.71	12.41	-0.28	5.83	-0.27	3.96	-0.21	
63	80100	0.75	0.34	0.06	75.11	6.81	-0.21	15.02	-0.15	2.98	-0.22	
64	80100	0.47	0.48	0.06	47.12	24.09	-0.23	16.63	-0.23	12.10	-0.17	
65	80100	0.73	0.40	0.04	72.63	10.01	-0.17	7.41	-0.27	9.90	-0.19	
66	80100	0.59	0.44	0.08	58.62	10.48	-0.27	22.32	-0.22	8.47	-0.15	
67	80100	0.86	0.39	0.05	85.57	3.70	-0.23	6.16	-0.17	4.51	-0.25	
68	80100	0.75	0.54	0.09	75.38	9.71	-0.28	8.13	-0.29	6.68	-0.28	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.6**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 8**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78596	0.54	0.43	0.04	54.01	5.27	-0.23	6.32	-0.15	34.35	-0.26	
2	78596	0.62	0.34	0.02	62.19	20.25	-0.30	14.60	-0.04	2.93	-0.18	
3	78596	0.64	0.42	0.06	63.94	5.46	-0.17	21.41	-0.20	9.13	-0.29	
4	78596	0.88	0.38	0.04	88.39	5.16	-0.22	4.45	-0.23	1.96	-0.18	
5	78596	0.70	0.47	0.03	69.54	10.99	-0.37	8.49	-0.24	10.95	-0.11	
6	78596	0.55	0.40	0.13	54.67	14.15	-0.17	23.06	-0.24	7.99	-0.13	
7	78596	0.57	0.36	0.17	56.66	22.30	-0.12	10.93	-0.22	9.93	-0.20	
8	78596	0.86	0.47	0.03	85.52	9.20	-0.33	3.58	-0.25	1.66	-0.19	
9	78596	0.61	0.42	0.05	61.28	6.65	-0.18	7.48	-0.24	24.53	-0.22	
10	78596	0.86	0.51	0.05	85.65	4.91	-0.32	4.06	-0.26	5.32	-0.26	
11	78596	0.73	0.38	0.02	72.55	4.29	-0.20	13.67	-0.19	9.47	-0.22	
12	78596	0.49	0.43	0.11	48.67	11.57	-0.15	28.59	-0.20	11.06	-0.25	
13	78596	0.66	0.46	0.05	65.90	8.12	-0.24	15.83	-0.21	10.08	-0.25	
14	78596	0.80	0.41	0.06	79.79	4.76	-0.13	6.77	-0.29	8.62	-0.23	
15	78596	0.81	0.38	0.04	81.18	2.95	-0.20	7.76	-0.23	8.07	-0.20	
16	78596	0.79	0.40	0.08	78.60	9.43	-0.21	6.78	-0.24	5.10	-0.18	
17	78596	0.78	0.41	0.02	77.60	4.75	-0.25	13.02	-0.23	4.60	-0.19	
18	78596	0.69	0.48	0.07	68.97	13.19	-0.25	11.10	-0.26	6.67	-0.23	
19	78596	0.66	0.49	0.05	66.14	14.13	-0.32	15.14	-0.22	4.52	-0.20	
20	78596	0.66	0.58	0.10	66.49	9.45	-0.26	9.33	-0.30	14.62	-0.31	
21	78596	0.73	0.47	0.04	72.83	11.24	-0.30	10.85	-0.27	5.02	-0.13	
22	78596	0.76	0.44	0.06	75.91	5.23	-0.23	7.89	-0.27	10.91	-0.21	
23	78596	0.82	0.39	0.02	81.95	1.64	-0.16	13.21	-0.27	3.19	-0.20	
24	78596	0.78	0.48	0.04	77.83	5.56	-0.23	11.23	-0.32	5.34	-0.19	
25	78596	0.63	0.39	0.04	63.34	6.00	-0.22	12.64	-0.15	17.98	-0.21	
26	78596	0.55	0.41	0.02	54.62	8.93	-0.27	22.20	-0.21	14.23	-0.13	
27	78596	0.32	0.31	0.07	31.87	14.54	-0.04	10.08	-0.18	43.43	-0.16	
28	78596	0.85	0.43	0.03	85.40	4.33	-0.28	3.84	-0.25	6.38	-0.19	
29	78596	0.39	0.23	0.03	38.51	4.38	-0.26	23.91	-0.05	33.16	-0.08	
30	78596	0.38	0.41	0.11	37.63	40.01	-0.08	8.69	-0.27	13.56	-0.25	
31	78596	0.64	0.38	0.04	63.89	11.32	-0.22	11.54	-0.21	13.21	-0.14	
32	78596	0.79	0.40	0.03	78.95	11.79	-0.21	4.88	-0.22	4.34	-0.22	
33	78596	0.50	0.38	0.06	50.39	22.90	-0.14	17.97	-0.21	8.67	-0.18	
34	78596	0.76	0.47	0.03	75.81	6.20	-0.25	8.91	-0.29	9.05	-0.21	
35	78596	0.36	0.33	0.03	36.30	48.91	-0.05	6.85	-0.28	7.89	-0.23	
36	78596	0.37	0.33	0.06	36.76	26.41	-0.26	32.18	-0.05	4.57	-0.10	
37	78596	0.76	0.35	0.03	75.64	7.09	-0.22	11.69	-0.09	5.55	-0.28	
38	78596	0.57	0.46	0.05	57.28	16.14	-0.23	16.22	-0.19	10.29	-0.25	
39	78596	0.73	0.32	0.04	73.31	3.25	-0.16	15.97	-0.15	7.43	-0.23	
40	78596	0.66	0.46	0.06	65.85	9.25	-0.23	8.23	-0.21	16.60	-0.25	

**Note.** Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.6 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT Grade 8**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78596	0.73	0.29	0.12	73.25	5.39	-0.18	12.48	-0.09	8.75	-0.20	
42	78596	0.90	0.38	0.01	90.18	1.56	-0.19	1.93	-0.23	6.30	-0.23	
43	78596	0.55	0.50	0.13	55.40	22.62	-0.27	13.96	-0.26	7.88	-0.15	
44	78596	0.62	0.49	0.05	61.65	4.38	-0.23	29.75	-0.34	4.16	-0.17	
45	78596	0.69	0.56	0.04	68.60	8.97	-0.29	12.38	-0.38	10.00	-0.17	
46	78596	0.51	0.42	0.06	51.34	18.33	-0.37	14.15	-0.21	16.12	0.01	
47	78596	0.73	0.39	0.03	72.67	9.84	-0.22	3.08	-0.21	14.37	-0.20	
48	78596	0.63	0.44	0.06	63.18	20.94	-0.26	9.64	-0.25	6.17	-0.13	
49	78596	0.61	0.48	0.06	61.24	6.78	-0.22	18.66	-0.33	13.25	-0.15	
50	78596	0.63	0.39	0.07	63.00	11.70	-0.17	17.88	-0.22	7.35	-0.19	
51	78596	0.84	0.53	0.03	84.30	4.54	-0.26	9.41	-0.38	1.71	-0.20	
52	78596	0.65	0.45	0.07	64.89	17.79	-0.20	10.70	-0.27	6.54	-0.22	
53	78596	0.35	0.33	0.10	34.96	36.79	-0.27	16.81	-0.11	11.33	0.04	
54	78596	0.50	0.45	0.04	50.44	14.38	-0.10	21.01	-0.27	14.13	-0.23	
55	78596	0.71	0.43	0.05	70.73	10.78	-0.23	11.59	-0.21	6.85	-0.23	
56	78596	0.78	0.53	0.09	77.63	10.91	-0.41	5.26	-0.20	6.10	-0.20	
57	78596	0.87	0.36	0.04	86.69	3.56	-0.22	2.64	-0.20	7.04	-0.19	
58	78596	0.72	0.40	0.06	72.19	5.41	-0.32	17.84	-0.17	4.50	-0.20	
59	78596	0.68	0.45	0.04	68.47	5.56	-0.15	11.62	-0.22	14.31	-0.29	
60	78596	0.59	0.42	0.05	59.25	7.23	-0.22	22.12	-0.13	11.33	-0.29	
61	78596	0.77	0.27	0.05	76.58	3.24	-0.20	16.22	-0.12	3.90	-0.18	
62	78596	0.60	0.34	0.07	60.35	12.55	-0.16	18.55	-0.18	8.48	-0.16	
63	78596	0.32	0.26	0.05	32.45	11.33	-0.07	30.90	-0.04	25.25	-0.18	
64	78596	0.77	0.49	0.06	77.07	9.63	-0.30	8.86	-0.27	4.35	-0.20	
65	78596	0.74	0.47	0.05	74.22	4.25	-0.25	11.28	-0.25	10.19	-0.25	
66	78596	0.80	0.43	0.06	80.42	3.90	-0.23	10.91	-0.26	4.69	-0.22	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.7**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT High School**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	68628	0.64	0.55	0.27	64.36		4.23	-0.19	20.14	-0.34	10.99	-0.29
2	68628	0.53	0.44	0.06	53.22		22.48	-0.23	19.58	-0.27	4.65	-0.07
3	68628	0.92	0.26	0.01	91.64		6.64	-0.19	1.12	-0.14	0.59	-0.11
4	68628	0.91	0.31	0.03	91.10		3.17	-0.20	4.19	-0.17	1.51	-0.17
5	68628	0.53	0.43	0.27	52.51		18.27	-0.22	11.17	-0.13	17.79	-0.23
6	68628	0.71	0.50	0.05	70.56		9.56	-0.24	11.15	-0.26	8.67	-0.25
7	68628	0.58	0.36	0.13	57.97		11.23	-0.24	13.46	-0.27	17.20	-0.02
8	68628	0.79	0.52	0.04	79.04		8.80	-0.33	7.28	-0.34	4.85	-0.14
9	68628	0.55	0.47	0.23	55.11		19.77	-0.15	15.67	-0.33	9.21	-0.18
10	68628	0.50	0.42	0.08	50.47		31.81	-0.30	10.43	-0.16	7.20	-0.09
11	68628	0.77	0.45	0.14	76.58		9.77	-0.23	6.11	-0.24	7.41	-0.25
12	68628	0.86	0.45	0.06	85.87		3.36	-0.21	8.39	-0.33	2.32	-0.18
13	68628	0.71	0.48	0.06	70.69		13.07	-0.30	5.28	-0.26	10.90	-0.18
14	68628	0.71	0.38	0.04	70.98		3.56	-0.20	3.87	-0.15	21.54	-0.26
15	68628	0.61	0.44	0.07	60.80		13.27	-0.32	18.15	-0.16	7.71	-0.17
16	68628	0.86	0.47	0.06	86.01		3.27	-0.21	5.21	-0.28	5.45	-0.28
17	68628	0.80	0.35	0.02	80.01		4.81	-0.14	11.32	-0.22	3.84	-0.21
18	68628	0.52	0.38	0.20	52.22		12.11	-0.16	27.32	-0.22	8.15	-0.15
19	68628	0.45	0.23	0.08	44.55		23.75	-0.24	14.29	-0.17	17.33	0.13
20	68628	0.57	0.39	0.16	57.19		28.70	-0.21	11.00	-0.21	2.94	-0.17
21	68628	0.89	0.41	0.02	89.01		3.31	-0.25	2.90	-0.25	4.76	-0.19
22	68628	0.77	0.56	0.11	77.15		4.97	-0.26	10.44	-0.35	7.33	-0.28
23	68628	0.64	0.48	0.04	64.19		6.19	-0.21	15.75	-0.28	13.82	-0.22
24	68628	0.71	0.45	0.05	71.18		12.25	-0.17	11.87	-0.30	4.64	-0.23
25	68628	0.50	0.37	0.18	49.97		18.72	-0.21	21.62	-0.18	9.51	-0.09
26	68628	0.94	0.28	0.02	93.75		1.87	-0.17	3.03	-0.16	1.31	-0.16
27	68628	0.85	0.44	0.04	85.35		4.06	-0.21	3.74	-0.26	6.81	-0.25
28	68628	0.61	0.57	0.06	61.05		24.72	-0.43	10.95	-0.22	3.22	-0.13
29	68628	0.82	0.47	0.07	81.73		9.05	-0.25	5.16	-0.28	3.98	-0.25
30	68628	0.73	0.54	0.04	73.02		8.29	-0.29	7.83	-0.29	10.81	-0.27
31	68628	0.72	0.58	0.10	71.72		10.51	-0.30	11.34	-0.34	6.31	-0.25
32	68628	0.75	0.39	0.04	75.36		4.97	-0.15	11.81	-0.26	7.81	-0.19
33	68628	0.59	0.40	0.03	58.89		7.82	-0.24	13.31	-0.25	19.94	-0.11
34	68628	0.77	0.50	0.05	77.07		9.30	-0.27	9.11	-0.30	4.46	-0.22
35	68628	0.71	0.52	0.08	70.67		11.53	-0.27	10.00	-0.28	7.71	-0.24
36	68628	0.54	0.45	0.04	53.66		26.94	-0.28	10.61	-0.12	8.74	-0.22
37	68628	0.60	0.41	0.07	59.68		9.94	-0.14	22.45	-0.27	7.85	-0.17
38	68628	0.59	0.49	0.13	59.40		8.34	-0.23	20.90	-0.24	11.22	-0.24
39	68628	0.74	0.42	0.09	74.39		10.13	-0.13	9.48	-0.31	5.90	-0.23
40	68628	0.58	0.42	0.07	57.83		14.13	-0.29	20.23	-0.16	7.73	-0.16
41	68628	0.57	0.39	0.06	57.25		11.18	-0.21	4.56	-0.24	26.94	-0.18
42	68628	0.70	0.42	0.06	70.38		4.95	-0.23	5.91	-0.27	18.70	-0.20
43	68628	0.75	0.43	0.06	74.90		11.14	-0.28	11.48	-0.26	2.41	-0.09

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.7 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics CRT High School**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
44	68628	0.49	0.37	0.26	49.49		23.27	-0.19	17.69	-0.19	9.27	-0.11
45	68628	0.53	0.45	0.08	53.40		22.23	-0.22	8.46	-0.22	15.83	-0.19
46	68628	0.72	0.32	0.09	72.00		7.87	-0.07	11.35	-0.22	8.69	-0.19
47	68628	0.77	0.50	0.03	77.36		16.20	-0.35	4.80	-0.27	1.61	-0.19
48	68628	0.54	0.32	0.08	54.18		19.35	-0.18	9.96	-0.27	16.42	-0.03
49	68628	0.72	0.48	0.05	72.12		4.68	-0.26	9.29	-0.27	13.84	-0.24
50	68628	0.79	0.42	0.06	78.56		10.18	-0.16	4.66	-0.26	6.54	-0.27
51	68628	0.72	0.46	0.11	71.69		3.88	-0.20	19.90	-0.34	4.41	-0.17
52	68628	0.61	0.41	0.08	60.67		14.91	-0.17	16.79	-0.23	7.55	-0.21
53	68628	0.48	0.33	0.20	48.18		27.67	-0.10	17.98	-0.24	5.96	-0.11
54	68628	0.76	0.39	0.06	76.45		15.34	-0.22	5.43	-0.23	2.70	-0.20
55	68628	0.40	0.32	0.19	39.74		27.62	0.01	20.96	-0.26	11.48	-0.16
56	68628	0.48	0.58	0.16	47.83		12.96	-0.29	16.78	-0.26	22.26	-0.22
57	68628	0.82	0.43	0.05	81.69		4.43	-0.19	11.11	-0.28	2.71	-0.23
58	68628	0.82	0.43	0.06	81.71		3.57	-0.22	9.13	-0.27	5.53	-0.21
59	68628	0.54	0.39	0.11	53.90		20.38	-0.12	18.20	-0.26	7.41	-0.17
60	68628	0.49	0.29	0.10	48.88		36.09	-0.13	12.06	-0.15	2.87	-0.19
61	68628	0.63	0.48	0.07	63.10		7.74	-0.22	12.34	-0.25	16.74	-0.23
62	68628	0.44	0.33	0.08	43.88		19.54	-0.05	15.21	-0.20	21.28	-0.18
63	68628	0.35	0.26	0.12	34.95		26.66	0.03	18.17	-0.22	20.09	-0.13
64	68628	0.51	0.37	0.08	51.07		12.50	-0.09	17.59	-0.29	18.75	-0.10
65	68628	0.60	0.42	0.25	60.00		15.96	-0.22	16.84	-0.22	6.94	-0.17
66	68628	0.64	0.42	0.07	64.44		18.41	-0.20	12.75	-0.23	4.32	-0.23
67	68628	0.51	0.36	0.28	50.60		8.92	-0.19	18.39	-0.20	21.79	-0.12
68	68628	0.60	0.33	0.08	59.83		17.89	-0.19	17.43	-0.09	4.76	-0.24
69	68628	0.35	0.27	0.13	35.20		32.55	-0.12	26.53	-0.04	5.58	-0.23
70	68628	0.84	0.42	0.08	83.63		4.89	-0.24	4.57	-0.28	6.82	-0.18
71	68628	0.53	0.37	0.12	53.44		9.95	-0.20	20.03	-0.14	16.45	-0.18
72	68628	0.79	0.46	0.10	78.61		9.91	-0.24	6.52	-0.30	4.86	-0.20
73	68628	0.88	0.44	0.05	87.61		6.49	-0.29	3.45	-0.23	2.39	-0.19
74	68628	0.66	0.46	0.11	65.89		7.62	-0.25	15.47	-0.27	10.88	-0.17
75	68628	0.66	0.44	0.07	66.24		19.83	-0.20	8.56	-0.27	5.29	-0.22
76	68628	0.73	0.53	0.08	73.42		14.92	-0.30	5.65	-0.29	5.92	-0.24
77	68628	0.64	0.45	0.07	64.19		14.35	-0.17	12.83	-0.25	8.55	-0.26
78	68628	0.58	0.35	0.10	57.95		12.84	-0.22	20.06	-0.10	9.02	-0.20
79	68628	0.72	0.56	0.08	71.88		13.57	-0.35	11.00	-0.27	3.46	-0.26
80	68628	0.81	0.46	0.06	80.59		5.59	-0.25	7.48	-0.27	6.27	-0.21
81	68628	0.48	0.31	0.09	47.55		17.92	-0.09	17.19	-0.22	17.24	-0.10
82	68628	0.62	0.31	0.09	61.57		21.80	-0.09	10.18	-0.25	6.34	-0.14
83	68628	0.60	0.42	0.09	59.82		8.85	-0.22	10.63	-0.20	20.59	-0.20
84	68628	0.87	0.39	0.09	86.66		3.57	-0.21	6.76	-0.21	2.92	-0.24

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.8**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 3**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80952	0.93	0.38	0.13	93.36	5.08	-0.30	1.43	-0.23	0.00	0.00	0.00
2	80952	0.85	0.36	0.18	84.86	4.87	-0.25	10.08	-0.25	0.00	0.00	0.00
3	80952	0.94	0.35	0.14	93.84	2.79	-0.27	3.22	-0.23	0.00	0.00	0.00
4	80952	0.80	0.40	0.19	80.24	9.00	-0.27	10.57	-0.25	0.00	0.00	0.00
5	80952	0.71	0.49	0.22	71.20	6.45	-0.26	15.02	-0.25	7.10	-0.27	-0.27
6	80952	0.64	0.35	0.35	63.93	17.43	-0.15	8.63	-0.13	9.65	-0.25	-0.25
7	80952	0.82	0.43	0.37	82.08	5.13	-0.23	3.59	-0.27	8.83	-0.21	-0.21
8	80952	0.72	0.36	0.47	71.76	5.69	-0.18	12.01	-0.14	10.05	-0.25	-0.25
9	80952	0.78	0.49	0.29	78.21	10.13	-0.23	4.85	-0.27	6.52	-0.29	-0.29
10	80952	0.54	0.42	0.62	53.74	16.42	-0.19	11.88	-0.22	17.32	-0.16	-0.16
11	80952	0.89	0.43	0.46	89.08	3.85	-0.23	2.71	-0.27	3.89	-0.23	-0.23
12	80952	0.82	0.51	0.52	82.34	4.66	-0.29	3.45	-0.27	9.02	-0.28	-0.28
13	80952	0.65	0.42	0.28	65.05	12.27	-0.20	15.46	-0.18	6.92	-0.28	-0.28
14	80952	0.62	0.46	0.42	61.66	24.66	-0.19	6.53	-0.27	6.73	-0.29	-0.29
15	80952	0.39	0.34	0.43	39.02	35.78	-0.02	13.36	-0.23	11.41	-0.23	-0.23
16	80952	0.30	0.30	2.40	30.15	11.70	-0.27	31.90	0.06	23.83	-0.14	-0.14
17	80952	0.67	0.39	0.18	67.41	14.40	-0.25	5.28	-0.23	12.73	-0.12	-0.12
18	80952	0.65	0.10	0.14	65.42	3.37	-0.21	19.05	0.13	12.01	-0.18	-0.18
19	80952	0.71	0.50	0.23	70.98	6.96	-0.28	13.30	-0.23	8.52	-0.28	-0.28
20	80952	0.55	0.37	0.37	55.26	7.30	-0.21	11.64	-0.20	25.43	-0.15	-0.15
21	80952	0.61	0.44	0.80	61.05	13.94	-0.18	14.19	-0.22	10.01	-0.25	-0.25
22	80952	0.79	0.51	0.18	79.42	7.10	-0.37	10.10	-0.23	3.20	-0.24	-0.24
23	80952	0.60	0.18	0.22	60.22	7.92	-0.28	11.19	-0.14	20.44	0.07	-0.07
24	80952	0.80	0.47	0.53	79.66	5.07	-0.29	5.53	-0.25	9.21	-0.23	-0.23
25	80952	0.37	0.17	0.13	37.50	11.92	-0.20	21.57	-0.04	28.88	0.00	-0.00
26	80952	0.65	0.48	0.25	64.94	20.52	-0.32	6.43	-0.29	7.84	-0.11	-0.11
27	80952	0.75	0.45	0.57	75.02	5.72	-0.24	7.47	-0.30	11.21	-0.18	-0.18
28	80952	0.57	0.45	1.11	56.79	11.62	-0.19	11.07	-0.33	19.41	-0.13	-0.13
29	80952	0.81	0.53	0.35	81.02	8.05	-0.26	5.33	-0.32	5.24	-0.29	-0.29
30	80952	0.61	0.35	0.45	60.66	26.75	-0.16	7.10	-0.11	5.02	-0.31	-0.31
31	80952	0.48	0.46	0.38	48.28	18.81	-0.28	17.51	-0.13	15.01	-0.20	-0.20
32	80952	0.76	0.52	0.34	75.85	9.51	-0.31	5.53	-0.29	8.76	-0.22	-0.22
33	80952	0.71	0.54	0.32	71.04	5.43	-0.31	6.86	-0.26	16.36	-0.30	-0.30
34	80952	0.71	0.52	0.33	70.57	9.44	-0.27	11.02	-0.28	8.63	-0.25	-0.25
35	80952	0.91	0.46	0.06	91.30	2.77	-0.27	3.21	-0.27	2.65	-0.24	-0.24
36	80952	0.78	0.50	0.16	77.79	8.04	-0.29	10.73	-0.26	3.28	-0.27	-0.27
37	80952	0.65	0.35	0.40	65.34	14.47	-0.20	8.04	-0.28	11.74	-0.05	-0.05
38	80952	0.78	0.51	0.72	77.63	7.11	-0.28	7.18	-0.28	7.35	-0.27	-0.27
39	80952	0.87	0.42	0.18	86.55	3.27	-0.27	7.36	-0.24	2.63	-0.19	-0.19
40	80952	0.72	0.34	0.28	72.29	6.59	-0.17	4.89	-0.18	15.94	-0.19	-0.19

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.8 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 3**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80952	0.44	0.37	0.60	43.68	20.15	-0.29	18.42	-0.07	17.13	-0.11	
42	80952	0.48	0.48	1.02	47.68	6.45	-0.25	31.41	-0.19	13.43	-0.26	
43	80952	0.59	0.37	1.43	58.60	19.83	-0.11	12.99	-0.26	7.13	-0.19	
44	80952	0.69	0.53	0.99	68.58	7.11	-0.28	12.44	-0.29	10.88	-0.21	
45	80952	0.73	0.34	0.32	72.61	10.85	-0.31	2.31	-0.26	13.90	-0.05	
46	80952	0.42	0.27	0.27	42.08	8.67	-0.19	8.38	-0.19	40.60	-0.05	
47	80952	0.61	0.36	0.57	60.89	6.33	-0.22	12.47	-0.27	19.74	-0.08	
48	80952	0.46	0.47	0.47	46.47	16.60	-0.37	20.95	-0.10	15.50	-0.16	
49	80952	0.59	0.45	1.12	58.90	14.18	-0.17	14.09	-0.27	11.70	-0.20	
50	80952	0.55	0.46	0.27	54.83	8.07	-0.32	30.85	-0.19	5.97	-0.22	
51	80952	0.66	0.56	0.61	65.90	10.64	-0.27	12.10	-0.33	10.73	-0.24	
52	80952	0.71	0.46	0.52	70.56	18.65	-0.28	6.37	-0.21	3.89	-0.23	
53	80952	0.71	0.39	0.46	71.16	11.28	-0.18	11.85	-0.18	5.25	-0.26	
54	80952	0.79	0.58	0.63	79.31	6.42	-0.26	10.21	-0.39	3.42	-0.28	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.9**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80418	0.85	0.44	0.06	85.22		10.21	-0.32	1.74	-0.19	2.76	-0.19
2	80418	0.71	0.30	0.03	71.15		19.18	-0.09	5.44	-0.26	4.18	-0.19
3	80418	0.63	0.49	0.05	63.41		18.69	-0.22	4.05	-0.25	13.78	-0.28
4	80418	0.56	0.29	0.09	55.77		9.90	-0.18	29.01	-0.09	5.22	-0.21
5	80418	0.79	0.52	0.07	79.02		5.79	-0.31	8.80	-0.24	6.31	-0.29
6	80418	0.70	0.33	0.09	69.66		13.54	-0.11	5.38	-0.22	11.32	-0.20
7	80418	0.65	0.52	0.25	64.57		7.98	-0.31	15.66	-0.24	11.53	-0.24
8	80418	0.85	0.47	0.05	85.22		4.73	-0.27	5.23	-0.26	4.77	-0.23
9	80418	0.28	0.18	0.10	27.66		24.34	-0.04	34.61	-0.07	13.29	-0.08
10	80418	0.60	0.22	0.07	59.74		4.01	-0.28	4.38	-0.27	31.79	0.01
11	80418	0.76	0.53	0.10	76.10		5.54	-0.28	10.48	-0.28	7.77	-0.27
12	80418	0.75	0.39	0.13	75.46		5.22	-0.29	3.99	-0.29	15.18	-0.13
13	80418	0.69	0.45	0.13	68.90		11.84	-0.28	4.53	-0.28	14.60	-0.17
14	80418	0.47	0.35	0.11	47.46		13.47	-0.19	18.59	-0.09	20.36	-0.19
15	80418	0.77	0.49	0.11	76.53		11.32	-0.26	4.84	-0.27	7.19	-0.25
16	80418	0.75	0.42	0.14	75.39		13.84	-0.17	5.54	-0.28	5.06	-0.26
17	80418	0.90	0.48	0.15	89.71		2.88	-0.27	3.61	-0.25	3.62	-0.29
18	80418	0.53	0.40	0.20	52.52		9.91	-0.21	18.13	-0.27	19.22	-0.08
19	80418	0.75	0.46	0.03	74.62		8.06	-0.23	13.09	-0.27	4.19	-0.23
20	80418	0.85	0.45	0.03	85.38		3.46	-0.23	4.57	-0.26	6.55	-0.25
21	80418	0.78	0.46	0.04	77.75		5.66	-0.22	11.55	-0.25	4.97	-0.27
22	80418	0.57	0.39	0.08	57.08		21.22	-0.19	9.04	-0.25	12.56	-0.13
23	80418	0.65	0.45	0.07	64.86		12.18	-0.17	6.98	-0.18	15.89	-0.31
24	80418	0.76	0.37	0.03	76.17		6.81	-0.29	13.74	-0.12	3.24	-0.24
25	80418	0.55	0.37	0.13	55.29		25.63	-0.15	14.55	-0.20	4.39	-0.23
26	80418	0.83	0.54	0.09	82.83		7.57	-0.33	5.50	-0.29	4.00	-0.25
27	80418	0.76	0.58	0.09	76.47		8.97	-0.33	6.31	-0.29	8.14	-0.28
28	80418	0.75	0.58	0.10	74.52		6.03	-0.27	5.36	-0.30	13.98	-0.35
29	80418	0.65	0.55	0.13	64.84		8.70	-0.28	11.11	-0.36	15.20	-0.19
30	80418	0.69	0.52	0.07	68.67		16.28	-0.25	7.54	-0.30	7.42	-0.25
31	80418	0.80	0.61	0.10	79.79		6.71	-0.32	6.95	-0.31	6.43	-0.33
32	80418	0.70	0.61	0.11	70.43		8.06	-0.26	11.70	-0.31	9.68	-0.36
33	80418	0.76	0.43	0.14	76.32		11.22	-0.22	8.14	-0.22	4.15	-0.25
34	80418	0.71	0.57	0.14	71.00		10.58	-0.25	6.62	-0.33	11.64	-0.31
35	80418	0.61	0.57	0.14	60.77		7.67	-0.36	20.78	-0.27	10.61	-0.23
36	80418	0.78	0.53	0.23	77.89		4.54	-0.32	10.56	-0.31	6.76	-0.22
37	80418	0.64	0.43	0.04	64.13		11.70	-0.20	7.36	-0.27	16.76	-0.20
38	80418	0.73	0.53	0.07	73.26		6.72	-0.29	7.94	-0.27	11.98	-0.27
39	80418	0.59	0.51	0.07	58.89		8.81	-0.27	10.05	-0.29	22.16	-0.21
40	80418	0.69	0.53	0.09	68.53		13.05	-0.27	7.53	-0.26	10.79	-0.28

**Note.** Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.9 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80418	0.74	0.41	0.06	73.77	9.37	-0.22	11.42	-0.22	5.37	-0.21	
42	80418	0.67	0.47	0.07	67.02	17.29	-0.22	9.30	-0.23	6.31	-0.29	
43	80418	0.64	0.49	0.12	64.06	6.88	-0.28	15.92	-0.12	13.00	-0.35	
44	80418	0.73	0.44	0.10	73.07	7.01	-0.24	9.45	-0.21	10.35	-0.22	
45	80418	0.71	0.54	0.12	71.34	5.98	-0.30	17.61	-0.29	4.91	-0.27	
46	80418	0.56	0.49	0.13	55.65	12.74	-0.27	10.55	-0.26	20.91	-0.17	
47	80418	0.36	0.19	0.07	36.36	18.79	-0.15	18.68	-0.08	26.09	-0.01	
48	80418	0.71	0.43	0.10	71.11	10.95	-0.23	10.85	-0.23	6.96	-0.20	
49	80418	0.87	0.50	0.12	86.60	4.93	-0.28	4.13	-0.28	4.20	-0.26	
50	80418	0.82	0.42	0.11	82.35	5.23	-0.30	8.21	-0.13	4.07	-0.27	
51	80418	0.86	0.58	0.12	85.60	4.75	-0.29	5.78	-0.35	3.72	-0.30	
52	80418	0.84	0.59	0.16	84.21	5.12	-0.34	5.55	-0.30	4.95	-0.33	
53	80418	0.76	0.52	0.14	75.52	7.83	-0.35	13.57	-0.25	2.94	-0.23	
54	80418	0.90	0.52	0.23	89.56	3.33	-0.27	3.17	-0.28	3.71	-0.32	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.10**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 5**

Item	N	P-Value	r pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	r pb	%	r pb	%	r pb	%	r pb
1	80999	0.77	0.43	0.05	77.29	6.48	-0.30	12.40	-0.20	3.77	-0.20	
2	80999	0.92	0.33	0.02	92.39	3.09	-0.17	1.51	-0.16	2.98	-0.22	
3	80999	0.81	0.46	0.07	80.98	3.29	-0.24	9.08	-0.26	6.57	-0.24	
4	80999	0.58	0.21	0.05	58.23	13.08	-0.23	9.90	-0.19	18.74	0.08	
5	80999	0.84	0.47	0.02	83.90	4.72	-0.26	5.72	-0.23	5.63	-0.27	
6	80999	0.61	0.41	0.03	61.42	17.59	-0.25	7.81	-0.25	13.15	-0.11	
7	80999	0.83	0.33	0.04	83.39	6.81	-0.15	5.53	-0.15	4.22	-0.26	
8	80999	0.72	0.40	0.03	72.38	16.56	-0.24	3.91	-0.22	7.12	-0.18	
9	80999	0.60	0.37	0.08	60.28	14.29	-0.23	4.41	-0.27	20.93	-0.11	
10	80999	0.68	0.43	0.05	67.61	7.81	-0.26	7.57	-0.25	16.95	-0.18	
11	80999	0.83	0.48	0.05	83.37	4.86	-0.28	5.96	-0.25	5.75	-0.26	
12	80999	0.61	0.39	0.19	61.13	10.40	-0.26	19.25	-0.14	9.02	-0.19	
13	80999	0.74	0.54	0.06	74.47	8.46	-0.31	7.43	-0.29	9.58	-0.24	
14	80999	0.61	0.49	0.09	60.60	13.07	-0.26	11.93	-0.25	14.32	-0.19	
15	80999	0.64	0.52	0.12	64.35	11.62	-0.31	13.92	-0.22	9.98	-0.24	
16	80999	0.68	0.41	0.11	68.09	15.56	-0.17	6.81	-0.26	9.41	-0.21	
17	80999	0.59	0.47	0.11	58.76	19.83	-0.14	11.22	-0.34	10.07	-0.22	
18	80999	0.61	0.34	0.24	61.39	15.06	-0.13	10.40	-0.24	12.91	-0.14	
19	80999	0.55	0.43	0.10	54.85	24.96	-0.15	9.82	-0.27	10.27	-0.22	
20	80999	0.59	0.29	0.14	58.93	5.37	-0.30	17.82	-0.12	17.71	-0.08	
21	80999	0.64	0.48	0.18	63.79	10.54	-0.28	15.49	-0.20	10.00	-0.23	
22	80999	0.73	0.48	0.20	73.01	8.08	-0.28	7.06	-0.26	11.65	-0.21	
23	80999	0.73	0.41	0.02	73.12	16.95	-0.26	3.13	-0.20	6.78	-0.18	
24	80999	0.69	0.45	0.03	68.53	1.81	-0.21	23.82	-0.28	5.79	-0.25	
25	80999	0.83	0.48	0.04	83.29	8.94	-0.40	4.06	-0.15	3.66	-0.20	
26	80999	0.51	0.22	0.05	50.60	7.44	-0.15	10.05	-0.18	31.83	-0.03	
27	80999	0.63	0.46	0.12	62.64	11.03	-0.34	20.13	-0.18	6.07	-0.17	
28	80999	0.73	0.51	0.05	72.62	3.20	-0.28	13.03	-0.31	11.10	-0.24	
29	80999	0.62	0.41	0.08	62.29	13.47	-0.27	9.43	-0.23	14.71	-0.10	
30	80999	0.66	0.39	0.07	65.97	5.90	-0.28	8.99	-0.25	19.07	-0.12	
31	80999	0.58	0.31	0.24	58.27	15.23	-0.13	7.35	-0.22	18.90	-0.11	
32	80999	0.86	0.38	0.04	86.27	8.42	-0.22	2.65	-0.22	2.61	-0.21	
33	80999	0.66	0.38	0.07	66.07	7.60	-0.18	16.86	-0.20	9.39	-0.20	
34	80999	0.67	0.48	0.08	67.28	6.36	-0.25	5.53	-0.25	20.74	-0.26	
35	80999	0.64	0.39	0.07	63.52	5.44	-0.27	24.42	-0.13	6.54	-0.29	
36	80999	0.66	0.41	0.08	66.30	12.90	-0.25	13.93	-0.15	6.76	-0.23	
37	80999	0.70	0.56	0.12	70.08	5.58	-0.27	19.23	-0.34	4.98	-0.28	
38	80999	0.60	0.24	0.05	59.72	10.17	-0.11	23.69	-0.05	6.36	-0.26	
39	80999	0.56	0.44	0.08	55.52	20.80	-0.14	7.78	-0.29	15.80	-0.23	
40	80999	0.40	0.28	0.09	40.00	14.68	-0.17	18.77	-0.14	26.45	-0.05	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.10 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80999	0.71	0.49	0.02	71.25	4.31	-0.15	12.39	-0.38	12.02	-0.20	
42	80999	0.60	0.29	0.01	59.53	18.12	-0.24	12.16	-0.03	10.15	-0.14	
43	80999	0.58	0.24	0.12	58.41	9.20	-0.15	11.30	-0.09	20.96	-0.12	
44	80999	0.58	0.32	0.04	58.00	11.97	-0.14	8.06	-0.24	21.93	-0.11	
45	80999	0.86	0.41	0.03	86.32	6.69	-0.23	3.34	-0.25	3.61	-0.22	
46	80999	0.50	0.32	0.06	49.97	14.73	-0.19	10.67	-0.23	24.56	-0.05	
47	80999	0.81	0.48	0.07	80.81	9.75	-0.25	3.97	-0.27	5.38	-0.28	
48	80999	0.63	0.25	0.19	63.49	22.80	0.02	6.32	-0.29	7.20	-0.22	
49	80999	0.55	0.29	0.04	54.66	30.83	-0.01	7.37	-0.31	7.09	-0.23	
50	80999	0.49	0.20	0.06	49.27	12.69	-0.15	9.38	-0.22	28.59	0.03	
51	80999	0.69	0.53	0.10	69.43	17.50	-0.28	6.50	-0.30	6.44	-0.26	
52	80999	0.65	0.39	0.06	65.33	18.38	-0.23	12.38	-0.16	3.84	-0.22	
53	80999	0.79	0.56	0.07	79.15	5.71	-0.29	7.52	-0.31	7.55	-0.29	
54	80999	0.86	0.49	0.11	86.32	4.90	-0.28	4.16	-0.25	4.50	-0.27	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.11**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 6**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80036	0.69	0.40	0.03	69.17	7.66	-0.21	7.18	-0.27	15.95	-0.17	
2	80036	0.92	0.44	0.03	91.58	2.67	-0.23	3.41	-0.27	2.30	-0.22	
3	80036	0.84	0.42	0.05	83.52	3.83	-0.31	3.54	-0.28	9.06	-0.15	
4	80036	0.64	0.37	0.08	64.41	18.77	-0.23	11.85	-0.19	4.88	-0.11	
5	80036	0.50	0.32	0.07	50.16	8.89	-0.28	27.91	-0.03	12.96	-0.19	
6	80036	0.81	0.51	0.04	81.01	5.36	-0.28	10.46	-0.32	3.14	-0.23	
7	80036	0.72	0.45	0.08	72.36	6.93	-0.25	16.17	-0.23	4.46	-0.27	
8	80036	0.82	0.43	0.03	81.76	8.48	-0.34	8.25	-0.19	1.48	-0.16	
9	80036	0.88	0.34	0.03	87.70	3.24	-0.20	5.89	-0.17	3.14	-0.21	
10	80036	0.78	0.33	0.04	77.83	2.60	-0.24	3.37	-0.16	16.14	-0.19	
11	80036	0.92	0.38	0.06	91.92	3.06	-0.20	2.81	-0.22	2.14	-0.21	
12	80036	0.86	0.48	0.05	86.01	4.27	-0.25	4.62	-0.25	5.06	-0.28	
13	80036	0.71	0.49	0.09	70.69	10.59	-0.23	13.97	-0.29	4.66	-0.23	
14	80036	0.74	0.56	0.07	74.21	8.83	-0.31	8.49	-0.27	8.39	-0.29	
15	80036	0.59	0.38	0.07	58.79	8.21	-0.25	20.64	-0.10	12.28	-0.24	
16	80036	0.70	0.48	0.10	70.25	14.22	-0.27	6.22	-0.29	9.19	-0.20	
17	80036	0.45	0.33	0.06	45.45	6.57	-0.31	36.18	0.01	11.74	-0.29	
18	80036	0.77	0.54	0.08	77.04	6.86	-0.27	9.82	-0.34	6.19	-0.24	
19	80036	0.74	0.58	0.09	74.29	6.47	-0.30	9.77	-0.28	9.36	-0.32	
20	80036	0.66	0.44	0.10	66.37	7.33	-0.24	21.83	-0.21	4.37	-0.26	
21	80036	0.84	0.45	0.10	84.15	5.31	-0.26	4.70	-0.27	5.72	-0.20	
22	80036	0.65	0.44	0.12	64.65	10.32	-0.20	9.63	-0.28	15.27	-0.18	
23	80036	0.67	0.29	0.03	66.53	20.32	-0.02	5.07	-0.23	8.04	-0.29	
24	80036	0.79	0.38	0.07	78.83	6.21	-0.20	9.24	-0.21	5.64	-0.20	
25	80036	0.88	0.44	0.11	87.91	2.76	-0.24	6.96	-0.27	2.26	-0.23	
26	80036	0.81	0.42	0.01	80.71	9.12	-0.21	7.65	-0.28	2.51	-0.20	
27	80036	0.69	0.49	0.02	68.51	13.30	-0.28	12.71	-0.27	5.45	-0.19	
28	80036	0.62	0.32	0.04	62.04	10.31	-0.19	11.34	-0.20	16.26	-0.09	
29	80036	0.38	0.31	0.05	38.11	4.74	-0.08	17.00	-0.25	40.08	-0.08	
30	80036	0.47	0.27	0.06	47.47	17.86	-0.22	14.38	-0.16	20.22	0.02	
31	80036	0.62	0.30	0.05	62.13	24.42	-0.14	9.62	-0.13	3.78	-0.25	
32	80036	0.90	0.47	0.05	89.89	3.07	-0.27	3.34	-0.26	3.64	-0.25	
33	80036	0.66	0.51	0.03	65.66	12.91	-0.37	14.22	-0.19	7.18	-0.19	
34	80036	0.52	0.36	0.05	52.37	29.41	-0.07	12.38	-0.24	5.77	-0.28	
35	80036	0.64	0.51	0.08	64.40	7.10	-0.28	15.63	-0.26	12.77	-0.24	
36	80036	0.70	0.41	0.09	69.62	11.30	-0.21	10.41	-0.20	8.58	-0.21	
37	80036	0.69	0.45	0.03	69.36	6.39	-0.21	14.71	-0.19	9.51	-0.30	
38	80036	0.70	0.24	0.03	69.83	5.08	-0.13	8.22	-0.27	16.81	-0.01	
39	80036	0.51	0.27	0.06	50.71	7.43	-0.27	35.48	-0.01	6.30	-0.25	
40	80036	0.67	0.41	0.05	67.40	12.58	-0.21	9.40	-0.21	10.57	-0.20	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.11 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 6**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80036	0.55	0.44	0.05	55.50	19.82	-0.13	6.94	-0.29	17.69	-0.23	
42	80036	0.47	0.31	0.07	47.17	7.51	-0.29	18.71	-0.20	26.52	0.00	
43	80036	0.46	0.32	0.07	46.40	16.68	-0.13	15.23	-0.20	21.60	-0.09	
44	80036	0.55	0.38	0.09	55.02	14.02	-0.19	17.53	-0.19	13.33	-0.16	
45	80036	0.47	0.28	0.27	46.93	15.10	-0.17	9.66	-0.16	28.03	-0.07	
46	80036	0.74	0.45	0.06	73.84	9.52	-0.25	8.78	-0.25	7.80	-0.20	
47	80036	0.76	0.49	0.07	75.68	4.91	-0.26	10.73	-0.30	8.60	-0.22	
48	80036	0.67	0.36	0.07	67.10	5.15	-0.25	22.77	-0.13	4.89	-0.28	
49	80036	0.68	0.53	0.10	68.16	12.27	-0.29	9.74	-0.29	9.71	-0.22	
50	80036	0.44	0.28	0.14	43.83	15.12	-0.16	19.90	-0.17	21.00	-0.03	
51	80036	0.64	0.39	0.07	63.65	16.45	-0.17	8.19	-0.30	11.63	-0.13	
52	80036	0.73	0.60	0.08	73.15	8.48	-0.27	8.06	-0.28	10.22	-0.37	
53	80036	0.44	0.33	0.10	44.17	29.10	-0.10	10.79	-0.22	15.83	-0.14	
54	80036	0.52	0.40	0.13	52.41	19.79	-0.20	14.60	-0.17	13.06	-0.17	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.12**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 7**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80414	0.91	0.33	0.01	90.62	3.13	-0.15	2.30	-0.15	3.93	-0.25	
2	80414	0.59	0.30	0.02	58.95	33.73	-0.12	4.94	-0.26	2.35	-0.19	
3	80414	0.82	0.46	0.02	82.15	13.48	-0.33	1.76	-0.21	2.57	-0.23	
4	80414	0.72	0.48	0.04	71.63	6.08	-0.29	7.52	-0.29	14.72	-0.20	
5	80414	0.74	0.42	0.02	73.72	4.48	-0.24	16.54	-0.27	5.25	-0.16	
6	80414	0.76	0.41	0.02	76.39	6.72	-0.30	3.39	-0.26	13.47	-0.16	
7	80414	0.66	0.46	0.03	66.13	8.21	-0.26	6.61	-0.19	19.01	-0.24	
8	80414	0.86	0.45	0.04	86.31	3.83	-0.27	3.28	-0.22	6.54	-0.26	
9	80414	0.59	0.40	0.03	59.30	24.76	-0.14	8.85	-0.30	7.05	-0.19	
10	80414	0.71	0.48	0.09	71.14	11.72	-0.27	4.05	-0.18	12.99	-0.28	
11	80414	0.71	0.25	0.02	71.14	11.87	-0.08	12.06	-0.18	4.91	-0.13	
12	80414	0.81	0.44	0.04	81.02	8.97	-0.21	4.90	-0.27	5.07	-0.25	
13	80414	0.80	0.30	0.02	80.11	6.84	-0.11	5.83	-0.21	7.19	-0.17	
14	80414	0.66	0.49	0.05	65.93	3.28	-0.25	25.58	-0.31	5.15	-0.25	
15	80414	0.76	0.45	0.06	76.32	9.93	-0.26	4.32	-0.26	9.35	-0.20	
16	80414	0.68	0.44	0.06	68.27	8.04	-0.20	12.36	-0.21	11.26	-0.24	
17	80414	0.88	0.34	0.04	88.22	4.05	-0.18	3.09	-0.20	4.59	-0.18	
18	80414	0.58	0.57	0.03	57.71	5.09	-0.26	15.23	-0.28	21.94	-0.30	
19	80414	0.60	0.46	0.10	60.47	12.39	-0.21	12.51	-0.26	14.52	-0.19	
20	80414	0.53	0.29	0.09	52.83	8.32	-0.22	10.40	-0.29	28.34	0.02	
21	80414	0.72	0.55	0.08	71.88	9.84	-0.27	9.71	-0.29	8.48	-0.28	
22	80414	0.69	0.52	0.06	69.15	6.75	-0.28	15.31	-0.28	8.73	-0.23	
23	80414	0.67	0.44	0.07	67.37	18.58	-0.13	7.43	-0.29	6.54	-0.32	
24	80414	0.57	0.28	0.09	56.52	6.92	-0.24	25.28	-0.09	11.18	-0.12	
25	80414	0.64	0.42	0.04	64.29	8.16	-0.26	16.97	-0.18	10.53	-0.20	
26	80414	0.67	0.42	0.03	67.41	11.74	-0.25	10.60	-0.22	10.20	-0.16	
27	80414	0.46	0.39	0.08	45.50	13.24	-0.13	19.39	-0.20	21.77	-0.16	
28	80414	0.51	0.37	0.05	51.45	11.47	-0.26	12.73	-0.23	24.29	-0.06	
29	80414	0.51	0.36	0.36	50.97	29.21	-0.11	7.45	-0.28	12.00	-0.16	
30	80414	0.67	0.50	0.07	67.49	17.31	-0.20	9.12	-0.31	6.01	-0.28	
31	80414	0.64	0.52	0.06	63.92	9.69	-0.27	6.52	-0.29	19.80	-0.25	
32	80414	0.61	0.41	0.27	60.51	8.77	-0.30	11.11	-0.28	19.33	-0.07	
33	80414	0.76	0.48	0.05	76.26	5.92	-0.28	12.24	-0.27	5.53	-0.23	
34	80414	0.56	0.34	0.08	56.19	22.02	-0.09	11.57	-0.21	10.14	-0.22	
35	80414	0.70	0.47	0.06	70.28	10.36	-0.28	8.21	-0.22	11.08	-0.22	
36	80414	0.67	0.52	0.09	67.23	9.01	-0.31	16.72	-0.22	6.96	-0.27	
37	80414	0.33	0.24	0.07	32.67	16.00	-0.24	17.25	-0.15	34.00	0.07	
38	80414	0.53	0.37	0.07	52.54	18.86	-0.09	13.24	-0.16	15.28	-0.26	
39	80414	0.67	0.33	0.05	67.08	15.40	-0.15	6.35	-0.23	11.11	-0.14	
40	80414	0.48	0.21	0.07	48.14	14.85	0.00	12.84	-0.24	24.09	-0.05	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.12 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 7**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	80414	0.72	0.45	0.11	71.79	9.36	-0.22	9.39	-0.24	9.34	-0.23	
42	80414	0.74	0.45	0.08	73.68	12.29	-0.27	8.46	-0.21	5.48	-0.22	
43	80414	0.70	0.37	0.02	69.98	4.83	-0.26	18.91	-0.19	6.25	-0.18	
44	80414	0.79	0.44	0.05	78.96	9.62	-0.15	5.70	-0.26	5.67	-0.33	
45	80414	0.68	0.40	0.05	68.02	12.66	-0.18	12.07	-0.23	7.19	-0.20	
46	80414	0.64	0.46	0.05	63.81	9.90	-0.22	6.01	-0.29	20.21	-0.22	
47	80414	0.78	0.53	0.04	77.80	10.39	-0.31	7.63	-0.30	4.14	-0.24	
48	80414	0.49	0.39	0.05	48.70	18.79	-0.23	19.90	-0.15	12.56	-0.15	
49	80414	0.65	0.45	0.07	64.54	10.98	-0.25	17.21	-0.16	7.16	-0.30	
50	80414	0.74	0.51	0.06	74.27	6.26	-0.29	12.36	-0.20	7.03	-0.33	
51	80414	0.55	0.41	0.11	55.29	23.18	-0.10	11.67	-0.24	9.74	-0.27	
52	80414	0.72	0.52	0.38	72.26	11.32	-0.27	9.85	-0.32	6.18	-0.20	
53	80414	0.74	0.44	0.06	73.92	5.87	-0.29	9.93	-0.23	10.19	-0.17	
54	80414	0.55	0.39	0.07	54.68	11.10	-0.26	12.51	-0.14	21.62	-0.15	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.13**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 8**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	78938	0.88	0.29	0.04	87.83		1.06	-0.14	4.72	-0.10	6.36	-0.24
2	78938	0.62	0.30	0.02	62.37		4.81	-0.27	28.47	-0.12	4.33	-0.17
3	78938	0.56	0.44	0.06	56.07		12.70	-0.19	15.52	-0.20	15.64	-0.22
4	78938	0.70	0.48	0.02	70.00		1.87	-0.20	24.96	-0.35	3.15	-0.23
5	78938	0.64	0.40	0.05	64.02		19.01	-0.19	7.71	-0.20	9.20	-0.22
6	78938	0.71	0.39	0.06	71.21		3.34	-0.22	13.87	-0.23	11.52	-0.18
7	78938	0.82	0.31	0.03	81.59		9.78	-0.17	6.97	-0.21	1.63	-0.14
8	78938	0.56	0.22	0.09	55.51		15.80	-0.07	8.67	-0.24	19.92	-0.03
9	78938	0.66	0.33	0.05	66.37		22.14	-0.10	6.65	-0.23	4.78	-0.25
10	78938	0.71	0.46	0.04	71.20		8.96	-0.26	9.02	-0.26	10.78	-0.19
11	78938	0.65	0.42	0.06	64.81		14.80	-0.13	9.46	-0.29	10.87	-0.22
12	78938	0.58	0.42	0.07	58.49		33.44	-0.26	3.66	-0.25	4.34	-0.20
13	78938	0.58	0.41	0.03	57.59		17.95	-0.18	14.44	-0.18	9.98	-0.23
14	78938	0.80	0.46	0.05	80.16		5.69	-0.27	10.17	-0.26	3.93	-0.21
15	78938	0.78	0.36	0.08	78.01		11.10	-0.22	6.04	-0.19	4.77	-0.17
16	78938	0.60	0.42	0.12	60.27		12.74	-0.18	15.78	-0.16	11.08	-0.26
17	78938	0.62	0.44	0.06	61.97		7.08	-0.27	24.57	-0.17	6.31	-0.30
18	78938	0.54	0.35	0.10	54.11		17.18	-0.14	16.21	-0.21	12.40	-0.14
19	78938	0.80	0.50	0.10	79.96		4.57	-0.26	4.32	-0.25	11.04	-0.30
20	78938	0.67	0.42	0.02	67.42		25.69	-0.25	4.21	-0.27	2.66	-0.21
21	78938	0.91	0.40	0.01	91.08		2.14	-0.22	4.38	-0.22	2.39	-0.23
22	78938	0.41	0.28	0.10	41.29		24.93	-0.04	17.79	-0.16	15.88	-0.16
23	78938	0.58	0.35	0.04	58.23		4.97	-0.17	3.60	-0.17	33.15	-0.22
24	78938	0.72	0.45	0.04	72.35		4.53	-0.25	20.52	-0.30	2.55	-0.19
25	78938	0.85	0.38	0.01	85.34		6.57	-0.24	4.34	-0.20	3.72	-0.17
26	78938	0.51	0.34	0.06	51.43		8.55	-0.22	5.52	-0.23	34.44	-0.12
27	78938	0.72	0.33	0.10	71.85		9.03	-0.18	15.46	-0.18	3.56	-0.16
28	78938	0.74	0.38	0.02	74.17		4.35	-0.19	12.27	-0.18	9.18	-0.23
29	78938	0.29	0.18	0.05	28.90		9.16	-0.27	51.39	0.06	10.49	-0.10
30	78938	0.72	0.53	0.04	72.29		8.59	-0.24	11.70	-0.32	7.38	-0.27
31	78938	0.71	0.41	0.05	71.25		9.50	-0.18	5.01	-0.23	14.19	-0.23
32	78938	0.66	0.28	0.21	66.17		20.68	-0.09	5.79	-0.24	7.14	-0.15
33	78938	0.74	0.52	0.03	74.27		9.16	-0.30	8.10	-0.28	8.43	-0.23
34	78938	0.68	0.45	0.03	68.05		18.94	-0.19	5.71	-0.28	7.25	-0.27
35	78938	0.87	0.46	0.06	87.18		4.42	-0.28	4.80	-0.26	3.53	-0.22
36	78938	0.52	0.31	0.05	52.32		25.22	-0.09	13.97	-0.19	8.43	-0.18
37	78938	0.46	0.27	0.04	45.62		16.11	-0.13	15.13	-0.23	23.09	0.00
38	78938	0.69	0.46	0.04	69.15		9.50	-0.29	15.02	-0.22	6.28	-0.19
39	78938	0.54	0.31	0.06	54.32		11.36	-0.24	7.38	-0.27	26.87	-0.02
40	78938	0.59	0.29	0.05	59.25		9.87	-0.24	5.68	-0.25	25.13	-0.03

**Note.** Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.13 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT Grade 8**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	78938	0.52	0.40	0.15	52.32	10.36	-0.21	28.77	-0.13	8.38	-0.26	
42	78938	0.82	0.42	0.09	82.23	5.42	-0.21	7.20	-0.22	5.05	-0.25	
43	78938	0.41	0.29	0.07	41.13	14.42	-0.10	26.12	-0.14	18.24	-0.12	
44	78938	0.60	0.40	0.33	59.92	11.78	-0.20	14.86	-0.28	13.11	-0.09	
45	78938	0.56	0.25	0.05	55.52	5.54	-0.27	7.44	-0.22	31.44	0.00	
46	78938	0.66	0.43	0.08	66.15	11.64	-0.21	9.57	-0.28	12.55	-0.16	
47	78938	0.63	0.46	0.08	63.00	11.18	-0.20	14.89	-0.21	10.84	-0.26	
48	78938	0.73	0.52	0.09	72.65	8.12	-0.30	5.80	-0.28	13.33	-0.24	
49	78938	0.76	0.49	0.07	76.27	5.75	-0.24	8.81	-0.25	9.08	-0.27	
50	78938	0.63	0.44	0.11	62.68	17.50	-0.20	11.76	-0.22	7.94	-0.23	
51	78938	0.70	0.49	0.06	69.53	7.78	-0.29	10.04	-0.24	12.58	-0.23	
52	78938	0.68	0.46	0.07	67.66	6.38	-0.22	18.40	-0.24	7.47	-0.24	
53	78938	0.64	0.49	0.07	64.19	11.65	-0.24	9.76	-0.29	14.32	-0.21	
54	78938	0.70	0.44	0.10	69.64	10.12	-0.21	7.70	-0.24	12.44	-0.21	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.14**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT High School**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	73458	0.70	0.43	0.08	69.57	11.76	-0.22	8.91	-0.23	9.68	-0.21	
2	73458	0.68	0.34	0.05	67.86	14.20	-0.27	12.75	-0.07	5.14	-0.21	
3	73458	0.83	0.34	0.04	82.85	9.16	-0.26	1.60	-0.17	6.34	-0.14	
4	73458	0.72	0.39	0.03	72.25	4.79	-0.33	3.62	-0.17	19.30	-0.18	
5	73458	0.64	0.31	0.07	63.75	18.61	-0.12	10.34	-0.18	7.22	-0.16	
6	73458	0.78	0.35	0.07	78.10	15.23	-0.24	2.86	-0.23	3.75	-0.11	
7	73458	0.43	0.37	0.06	43.26	6.25	-0.14	5.68	-0.21	44.75	-0.20	
8	73458	0.76	0.41	0.03	76.35	12.38	-0.27	6.19	-0.21	5.04	-0.16	
9	73458	0.62	0.32	0.06	62.44	24.82	-0.14	4.32	-0.19	8.34	-0.20	
10	73458	0.57	0.28	0.02	57.19	30.52	-0.13	1.87	-0.12	10.38	-0.20	
11	73458	0.85	0.39	0.05	85.43	4.03	-0.28	3.83	-0.25	6.66	-0.14	
12	73458	0.83	0.41	0.16	83.46	4.49	-0.26	5.52	-0.25	6.35	-0.17	
13	73458	0.78	0.35	0.04	77.74	1.15	-0.14	18.39	-0.25	2.67	-0.21	
14	73458	0.87	0.47	0.06	87.18	3.10	-0.27	3.23	-0.26	6.42	-0.26	
15	73458	0.81	0.52	0.04	81.30	6.85	-0.34	4.39	-0.25	7.41	-0.24	
16	73458	0.57	0.21	0.09	56.92	10.80	-0.12	26.24	-0.05	5.95	-0.19	
17	73458	0.73	0.28	0.08	72.84	13.33	-0.01	2.99	-0.23	10.74	-0.26	
18	73458	0.62	0.23	0.08	62.19	6.03	-0.19	5.93	-0.22	25.77	-0.03	
19	73458	0.53	0.40	0.08	52.84	9.62	-0.33	19.25	-0.15	18.21	-0.11	
20	73458	0.64	0.46	0.14	64.16	14.07	-0.20	10.97	-0.23	10.65	-0.26	
21	73458	0.90	0.43	0.13	90.37	2.47	-0.22	3.77	-0.26	3.25	-0.23	
22	73458	0.68	0.53	0.10	68.38	6.40	-0.27	9.45	-0.31	15.66	-0.25	
23	73458	0.87	0.50	0.08	87.43	3.79	-0.25	4.39	-0.29	4.31	-0.27	
24	73458	0.75	0.53	0.07	75.39	14.72	-0.49	6.29	-0.17	3.52	-0.07	
25	73458	0.66	0.37	0.10	66.11	5.79	-0.29	5.07	-0.32	22.92	-0.08	
26	73458	0.68	0.45	0.10	67.65	13.88	-0.33	15.44	-0.14	2.92	-0.25	
27	73458	0.66	0.45	0.08	65.70	22.87	-0.29	9.45	-0.22	1.89	-0.19	
28	73458	0.87	0.50	0.08	86.58	4.98	-0.28	3.42	-0.28	4.93	-0.26	
29	73458	0.72	0.48	0.09	71.87	7.63	-0.37	7.08	-0.28	13.32	-0.12	
30	73458	0.73	0.50	0.09	72.56	6.86	-0.24	14.87	-0.24	5.61	-0.31	
31	73458	0.51	0.45	0.12	50.51	6.12	-0.25	26.33	-0.18	16.92	-0.22	
32	73458	0.41	0.33	0.15	40.78	20.72	-0.13	35.44	-0.15	2.90	-0.20	
33	73458	0.58	0.51	0.11	57.82	17.81	-0.21	9.00	-0.26	15.26	-0.25	
34	73458	0.70	0.45	0.10	70.08	5.11	-0.24	13.26	-0.25	11.45	-0.21	
35	73458	0.73	0.40	0.09	72.92	6.07	-0.28	2.73	-0.24	18.18	-0.18	
36	73458	0.59	0.49	0.09	58.76	8.51	-0.18	15.44	-0.26	17.19	-0.26	
37	73458	0.91	0.47	0.13	90.68	3.27	-0.29	3.10	-0.24	2.81	-0.25	
38	73458	0.61	0.32	0.10	60.75	5.40	-0.24	29.54	-0.09	4.20	-0.29	
39	73458	0.58	0.48	0.12	57.90	30.13	-0.31	3.09	-0.24	8.75	-0.17	
40	73458	0.58	0.44	0.12	58.18	18.52	-0.25	5.47	-0.28	17.70	-0.14	

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

(table continues)

**Table 6.4.14 (continued)**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading CRT High School**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
41	73458	0.86	0.51	0.10	85.97	3.86	-0.25	5.40	-0.29	4.66	-0.30	
42	73458	0.75	0.40	0.09	74.74	9.72	-0.24	4.16	-0.27	11.29	-0.15	
43	73458	0.75	0.38	0.21	74.55	14.48	-0.16	4.73	-0.28	6.02	-0.18	
44	73458	0.60	0.32	0.11	59.83	26.26	-0.05	6.62	-0.31	7.18	-0.20	
45	73458	0.63	0.39	0.12	62.60	12.47	-0.18	6.54	-0.28	18.26	-0.15	
46	73458	0.28	0.23	0.13	27.93	51.16	0.08	4.08	-0.23	16.70	-0.26	
47	73458	0.61	0.40	0.15	61.06	6.89	-0.29	9.91	-0.16	21.98	-0.17	
48	73458	0.46	0.20	0.15	45.89	17.30	0.00	9.73	-0.17	26.92	-0.10	
49	73458	0.57	0.49	0.15	57.08	11.31	-0.25	15.04	-0.20	16.42	-0.23	
50	73458	0.68	0.44	0.14	67.66	7.83	-0.24	11.33	-0.19	13.04	-0.23	
51	73458	0.55	0.30	0.20	55.30	23.43	-0.13	7.01	-0.27	14.05	-0.06	
52	73458	0.66	0.44	0.18	65.57	20.44	-0.13	6.65	-0.32	7.16	-0.27	
53	73458	0.48	0.42	0.18	48.46	11.59	-0.22	33.30	-0.19	6.46	-0.19	
54	73458	0.80	0.44	0.22	79.54	4.61	-0.25	6.16	-0.26	9.47	-0.20	

Note. Item number is not the item number in test booklet due to imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.15**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 3**

Trait	N	P-Value	<i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	80411	0.61	0.84	0.48	3.50	1.37	6.34	23.98	46.81	14.42	3.10	0.00
2	80411	0.60	0.84	0.48	3.50	1.57	7.22	26.08	45.69	12.66	2.80	0.00
3	80411	0.58	0.87	0.48	3.50	2.24	8.60	28.33	44.01	10.62	2.22	0.00
4	80411	0.58	0.87	0.48	3.50	2.06	7.45	27.74	46.70	9.94	2.13	0.00
5	80411	0.57	0.87	0.48	3.50	2.37	9.30	29.16	43.99	9.13	2.07	0.00
6	80411	0.57	0.79	0.48	3.50	2.47	11.17	29.02	40.62	10.39	2.34	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.16**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 4**

Trait	N	P-Value	<i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79796	0.57	0.85	0.34	2.95	2.61	8.13	31.62	43.87	9.27	1.23	0.00
2	79796	0.56	0.85	0.34	2.95	2.94	9.30	32.22	42.85	8.28	1.12	0.00
3	79796	0.57	0.85	0.34	2.95	2.23	8.44	35.70	38.41	9.82	2.11	0.00
4	79796	0.57	0.86	0.34	2.95	2.13	7.97	37.61	38.05	8.98	1.98	0.00
5	79796	0.56	0.86	0.34	2.95	2.43	10.12	36.59	37.15	8.52	1.91	0.00
6	79796	0.55	0.83	0.34	2.95	3.87	10.84	33.24	40.30	7.43	1.03	0.00

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.17**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 5**

Trait	N	P-Value	<i>r</i>	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	80291	0.57	0.81	0.32	1.26	1.97	9.21	38.90	37.55	9.26	1.50	0.02
2	80291	0.56	0.81	0.32	1.26	2.21	11.34	38.07	37.92	7.67	1.20	0.02
3	80291	0.57	0.84	0.32	1.26	2.12	10.28	33.98	41.94	8.85	1.23	0.02
4	80291	0.56	0.85	0.32	1.26	2.24	10.49	36.26	41.36	7.08	0.98	0.02
5	80291	0.56	0.85	0.32	1.26	2.51	12.03	36.43	40.25	6.24	0.93	0.02
6	80291	0.58	0.79	0.32	1.26	2.48	9.28	31.92	44.51	8.85	1.37	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.18**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 6**

Trait	N	P-Value	$r$	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79288	0.51	0.75	0.47	2.50	1.25	12.43	54.77	25.35	2.88	0.32	0.02
2	79288	0.51	0.77	0.47	2.50	1.93	13.64	51.61	27.05	2.51	0.27	0.02
3	79288	0.52	0.83	0.47	2.50	2.31	13.28	46.31	30.38	4.48	0.25	0.02
4	79288	0.52	0.84	0.47	2.50	2.23	12.09	50.16	28.85	3.48	0.22	0.02
5	79288	0.52	0.84	0.47	2.50	2.32	12.79	49.16	29.01	3.52	0.21	0.02
6	79288	0.56	0.73	0.47	2.50	2.02	8.48	36.01	46.17	3.94	0.39	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.19**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 7**

Trait	N	P-Value	$r$	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	79771	0.56	0.83	0.50	0.84	2.32	11.40	37.44	39.09	7.29	1.09	0.02
2	79771	0.56	0.83	0.50	0.84	3.00	12.40	35.58	39.82	6.84	0.99	0.02
3	79771	0.57	0.85	0.50	0.84	2.91	10.34	33.86	41.37	8.53	1.63	0.02
4	79771	0.57	0.86	0.50	0.84	2.84	9.37	35.67	41.27	7.92	1.56	0.02
5	79771	0.57	0.86	0.50	0.84	2.96	10.30	34.48	41.58	7.72	1.59	0.02
6	79771	0.55	0.82	0.50	0.84	3.59	12.52	37.31	37.73	6.49	0.99	0.02

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.20**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT Grade 8**

Trait	N	P-Value	$r$	Percentages								
				Omit	at 0	at 1	at 2	at 3	at 4	at 5	at 6	Invalid
1	78334	0.60	0.83	0.47	0.79	1.31	7.43	28.94	48.10	11.50	1.46	0.01
2	78334	0.59	0.83	0.47	0.79	1.49	7.88	30.02	48.93	9.15	1.26	0.01
3	78334	0.59	0.85	0.47	0.79	1.63	6.92	34.09	44.86	10.02	1.22	0.01
4	78334	0.59	0.85	0.47	0.79	1.58	6.62	35.51	44.71	9.18	1.13	0.01
5	78334	0.58	0.85	0.47	0.79	1.92	7.76	35.64	43.43	8.90	1.09	0.01
6	78334	0.59	0.82	0.47	0.79	1.87	7.99	30.94	48.37	8.46	1.11	0.01

Note. This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.21**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT High School Prompt A**

Trait	N	P-Value	<i>r</i>	Percentages													
				Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	72178	0.59	0.84	1.39	0.50	0.51	0.72	3.84	6.34	18.02	20.40	32.86	9.54	4.05	1.33	0.48	0.02
2	72178	0.59	0.83	1.39	0.50	0.60	0.81	3.55	5.66	18.61	20.01	35.51	8.65	3.34	0.98	0.37	0.02
3	72178	0.61	0.89	1.39	0.50	0.90	0.91	2.65	4.51	15.33	20.39	35.25	11.33	4.93	1.44	0.44	0.02
4	72178	0.60	0.89	1.39	0.50	0.94	0.92	2.62	4.52	16.50	20.28	35.37	10.26	4.82	1.40	0.45	0.02
5	72178	0.60	0.90	1.39	0.50	1.07	1.03	2.97	4.86	16.46	19.86	35.07	10.40	4.59	1.36	0.43	0.02
6	72178	0.59	0.84	1.39	0.50	0.67	0.94	2.75	5.26	15.77	21.41	39.78	7.81	2.59	0.83	0.28	0.02

**Note.** This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.22**  
**2007 Spring AIMS Classical Item Analysis**  
**Writing CRT High School Prompt T**

Trait	N	P-Value	<i>r</i>	Percentages													
				Omit	at 0	at 1	at 1.5	at 2	at 2.5	at 3	at 3.5	at 4	at 4.5	at 5	at 5.5	at 6	Invalid
1	2066	0.51	0.89	2.86	2.57	1.74	2.18	8.52	10.07	27.44	18.68	17.96	4.84	2.27	0.39	0.44	0.05
2	2066	0.51	0.88	2.86	2.57	1.69	2.37	7.94	9.24	28.41	16.99	20.81	4.40	1.89	0.53	0.24	0.05
3	2066	0.54	0.91	2.86	2.57	1.94	1.74	5.47	7.79	21.54	20.43	24.88	6.78	2.76	0.87	0.34	0.05
4	2066	0.53	0.92	2.86	2.57	1.84	1.69	4.99	7.94	23.77	20.23	24.25	6.78	1.84	0.82	0.39	0.05
5	2066	0.53	0.91	2.86	2.57	1.94	1.89	5.76	8.33	22.94	19.60	24.78	6.15	1.79	0.97	0.39	0.05
6	2066	0.52	0.89	2.86	2.57	1.69	2.76	7.55	8.23	23.28	18.68	25.85	4.02	1.84	0.24	0.39	0.05

**Note.** This test included a single prompt item scored on the analytic six-trait rubric. Blank responses were treated as omit. Illegible responses, non-English responses, and off-topic responses were treated as 0. Note that the N count in this table is higher than that in the test statistics table, due to the inclusion of students omitting a response in computations. The statistics presented in this table are based on census data.

**Table 6.4.23**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 3**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	81252	0.99	0.17	0.15	98.88	0.25	-0.09	0.33	-0.10	0.38	-0.10	
2	81252	0.68	0.35	0.29	68.38	9.43	-0.23	13.41	-0.19	8.47	-0.11	
3	81252	0.39	0.23	0.43	38.53	26.88	-0.06	20.62	-0.09	13.51	-0.13	
4	81252	0.49	0.29	0.48	48.79	6.47	-0.15	35.66	-0.12	8.59	-0.17	
5	81252	0.77	0.38	0.53	77.01	1.59	-0.19	14.74	-0.15	6.11	-0.33	
6	81252	0.85	0.31	0.58	84.65	1.91	-0.14	8.98	-0.20	3.85	-0.17	
7	81252	0.95	0.25	0.37	95.23	1.90	-0.16	1.29	-0.13	1.14	-0.13	
8	81252	0.74	0.45	0.89	73.57	11.22	-0.28	10.18	-0.25	4.12	-0.17	
9	81252	0.60	0.42	0.34	60.02	2.75	-0.09	7.55	-0.10	29.22	-0.36	
10	81252	0.77	0.53	0.35	76.62	8.15	-0.23	8.90	-0.32	5.96	-0.27	
11	81252	0.85	0.41	0.29	85.41	9.94	-0.29	3.19	-0.20	1.16	-0.19	
12	81252	0.80	0.46	0.39	79.91	4.02	-0.16	7.27	-0.26	8.41	-0.30	
13	81252	0.90	0.38	0.33	89.74	2.83	-0.22	3.83	-0.18	3.25	-0.24	
14	81252	0.94	0.34	1.02	93.54	1.50	-0.18	1.48	-0.21	2.46	-0.22	
15	81252	0.66	0.21	0.24	65.65	9.19	-0.19	13.54	-0.06	11.34	-0.06	
16	81252	0.53	0.31	0.47	52.92	14.07	-0.08	17.02	-0.19	15.51	-0.15	
17	81252	0.83	0.28	0.37	83.37	9.21	-0.17	4.58	-0.16	2.46	-0.14	
18	81252	0.63	0.37	0.59	63.30	17.09	-0.15	8.52	-0.15	10.48	-0.24	
19	81252	0.84	0.35	0.27	83.95	6.23	-0.16	2.21	-0.20	7.31	-0.22	
20	81252	0.63	0.42	0.51	62.85	13.51	-0.19	9.70	-0.17	13.41	-0.26	
21	81252	0.47	0.38	0.72	46.92	26.10	-0.16	12.07	-0.25	14.18	-0.10	
22	81252	0.55	0.34	0.33	54.57	27.64	-0.15	8.56	-0.23	8.88	-0.12	
23	81252	0.88	0.39	1.01	87.74	2.36	-0.21	4.70	-0.21	4.19	-0.25	
24	81252	0.86	0.40	1.50	86.04	3.27	-0.24	5.39	-0.21	3.77	-0.24	
25	81252	0.86	0.36	0.39	86.07	5.72	-0.29	1.94	-0.18	5.86	-0.12	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.24**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80644	0.86	0.41	0.05	85.86	5.89	-0.21	4.97	-0.23	3.22	-0.23	
2	80644	0.86	0.34	0.05	86.41	1.42	-0.18	3.28	-0.22	8.82	-0.20	
3	80644	0.86	0.37	0.05	85.64	6.89	-0.18	3.41	-0.23	4.00	-0.21	
4	80644	0.56	0.33	0.13	56.05	4.92	-0.23	9.50	-0.20	29.38	-0.11	
5	80644	0.80	0.21	0.14	79.55	1.45	-0.16	17.53	-0.13	1.33	-0.12	
6	80644	0.85	0.31	0.03	84.74	4.57	-0.17	7.17	-0.18	3.48	-0.17	
7	80644	0.60	0.49	0.08	59.94	14.87	-0.11	13.56	-0.34	11.53	-0.26	
8	80644	0.79	0.50	0.06	78.84	13.28	-0.36	3.83	-0.25	3.97	-0.17	
9	80644	0.79	0.46	0.09	78.53	4.55	-0.23	11.37	-0.26	5.43	-0.25	
10	80644	0.88	0.32	0.07	87.90	3.61	-0.17	5.52	-0.20	2.89	-0.16	
11	80644	0.94	0.37	0.12	93.52	1.98	-0.21	2.91	-0.22	1.46	-0.19	
12	80644	0.84	0.46	0.04	84.29	5.36	-0.27	4.74	-0.24	5.56	-0.23	
13	80644	0.88	0.41	0.06	88.39	2.91	-0.21	3.47	-0.22	5.14	-0.24	
14	80644	0.57	0.30	0.04	57.28	7.31	-0.22	5.37	-0.19	29.97	-0.11	
15	80644	0.74	0.44	0.08	74.08	15.07	-0.21	5.19	-0.25	5.56	-0.26	
16	80644	0.65	0.46	0.06	64.68	21.18	-0.27	7.69	-0.27	6.37	-0.16	
17	80644	0.57	0.37	0.11	57.45	15.13	-0.19	13.53	-0.14	13.77	-0.20	
18	80644	0.45	0.40	0.09	44.66	27.15	-0.08	15.87	-0.24	12.19	-0.23	
19	80644	0.68	0.38	0.18	68.06	6.83	-0.28	9.31	-0.21	15.56	-0.11	
20	80644	0.90	0.32	0.07	90.36	3.42	-0.19	3.50	-0.16	2.61	-0.17	
21	80644	0.60	0.45	0.06	59.57	5.53	-0.20	7.47	-0.20	27.34	-0.27	
22	80644	0.76	0.44	0.07	75.87	8.62	-0.26	6.99	-0.24	8.44	-0.20	
23	80644	0.45	0.25	0.25	45.44	12.79	-0.16	14.92	-0.10	26.59	-0.07	
24	80644	0.64	0.38	0.14	63.50	18.84	-0.13	8.73	-0.25	8.75	-0.23	
25	80644	0.67	0.41	0.15	66.66	13.57	-0.25	13.32	-0.17	6.26	-0.20	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.25**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	81165	0.70	0.32	0.07	69.76		2.93	-0.22	13.66	-0.19	13.57	-0.12
2	81165	0.55	0.34	0.05	55.00		6.83	-0.19	19.52	-0.12	18.60	-0.19
3	81165	0.51	0.34	0.06	50.80		16.52	-0.19	16.97	-0.18	15.64	-0.09
4	81165	0.78	0.36	0.07	77.74		9.96	-0.18	7.88	-0.17	4.34	-0.25
5	81165	0.45	0.40	0.10	44.98		24.18	-0.06	17.74	-0.23	12.99	-0.25
6	81165	0.90	0.34	0.03	90.44		3.76	-0.27	3.12	-0.13	2.65	-0.17
7	81165	0.79	0.49	0.16	78.93		8.53	-0.27	5.36	-0.25	7.02	-0.26
8	81165	0.83	0.45	0.07	83.45		6.98	-0.26	5.91	-0.25	3.58	-0.22
9	81165	0.80	0.52	0.04	79.80		10.19	-0.37	4.80	-0.24	5.16	-0.21
10	81165	0.58	0.46	0.02	58.36		12.73	-0.12	22.02	-0.36	6.87	-0.15
11	81165	0.92	0.22	0.04	91.79		2.29	-0.11	3.59	-0.13	2.29	-0.14
12	81165	0.64	0.40	0.07	64.04		9.52	-0.26	7.52	-0.23	18.84	-0.13
13	81165	0.72	0.46	0.15	71.86		5.54	-0.21	11.12	-0.24	11.33	-0.26
14	81165	0.64	0.50	0.08	64.16		13.69	-0.35	13.83	-0.22	8.23	-0.16
15	81165	0.66	0.48	0.08	65.82		3.84	-0.23	4.79	-0.25	25.46	-0.29
16	81165	0.61	0.46	0.11	60.95		23.87	-0.23	7.92	-0.24	7.15	-0.23
17	81165	0.81	0.44	0.01	81.40		8.58	-0.29	5.69	-0.26	4.31	-0.15
18	81165	0.77	0.30	0.06	77.47		3.04	-0.14	12.55	-0.17	6.87	-0.19
19	81165	0.88	0.35	0.02	87.57		4.86	-0.23	3.29	-0.18	4.25	-0.17
20	81165	0.70	0.42	0.03	70.21		10.19	-0.20	14.46	-0.23	5.11	-0.23
21	81165	0.85	0.40	0.03	85.22		3.84	-0.21	4.71	-0.25	6.19	-0.20
22	81165	0.57	0.34	0.06	57.22		17.71	-0.23	13.88	-0.10	11.11	-0.14
23	81165	0.59	0.37	0.09	58.76		6.52	-0.17	13.70	-0.17	20.89	-0.20
24	81165	0.50	0.46	0.11	49.98		4.49	-0.26	40.25	-0.24	5.16	-0.27
25	81165	0.59	0.39	0.21	59.37		13.36	-0.17	11.97	-0.17	15.08	-0.22

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.26**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 6**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	79987	0.78	0.50	0.07	78.20	11.69	-0.30	7.76	-0.30	2.28	-0.19	
2	79987	0.45	0.37	0.09	45.14	13.44	-0.03	14.45	-0.19	26.87	-0.23	
3	79987	0.61	0.37	0.09	61.41	12.02	-0.11	14.82	-0.17	11.65	-0.27	
4	79987	0.66	0.47	0.02	66.34	16.03	-0.31	3.16	-0.12	14.45	-0.25	
5	79987	0.77	0.46	0.05	76.64	8.25	-0.27	7.50	-0.26	7.56	-0.20	
6	79987	0.74	0.45	0.05	73.87	6.21	-0.20	10.60	-0.31	9.25	-0.19	
7	79987	0.54	0.36	0.09	53.57	20.90	-0.27	18.77	-0.05	6.66	-0.20	
8	79987	0.74	0.40	0.06	74.04	10.34	-0.15	5.26	-0.21	10.28	-0.26	
9	79987	0.80	0.48	0.06	79.82	6.56	-0.30	8.50	-0.28	5.05	-0.19	
10	79987	0.93	0.33	0.01	93.21	1.07	-0.11	1.21	-0.16	4.49	-0.26	
11	79987	0.80	0.44	0.04	79.75	1.78	-0.17	5.32	-0.19	13.10	-0.33	
12	79987	0.76	0.48	0.02	75.76	11.36	-0.28	6.83	-0.28	6.01	-0.19	
13	79987	0.77	0.36	0.05	77.20	6.41	-0.24	12.02	-0.14	4.32	-0.23	
14	79987	0.65	0.39	0.09	65.28	5.45	-0.18	11.57	-0.26	17.59	-0.16	
15	79987	0.65	0.46	0.07	65.30	8.44	-0.21	17.38	-0.20	8.80	-0.29	
16	79987	0.56	0.34	0.03	55.82	6.16	-0.25	9.14	-0.24	28.85	-0.09	
17	79987	0.69	0.49	0.04	68.59	13.94	-0.19	9.20	-0.30	8.22	-0.28	
18	79987	0.63	0.35	0.04	63.10	13.25	-0.18	10.99	-0.17	12.59	-0.16	
19	79987	0.69	0.54	0.08	69.01	15.05	-0.26	5.05	-0.22	10.78	-0.34	
20	79987	0.55	0.40	0.06	54.79	24.28	-0.27	10.51	-0.11	10.35	-0.17	
21	79987	0.73	0.41	0.03	73.08	13.47	-0.26	5.14	-0.22	8.27	-0.16	
22	79987	0.60	0.35	0.05	60.06	21.93	-0.15	11.18	-0.29	6.78	-0.08	
23	79987	0.74	0.48	0.03	74.02	10.31	-0.26	8.86	-0.27	6.78	-0.21	
24	79987	0.55	0.36	0.05	55.10	15.74	-0.19	13.18	-0.15	15.92	-0.16	
25	79987	0.68	0.53	0.08	68.39	11.92	-0.22	10.50	-0.28	9.10	-0.31	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.27**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 7**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80100	0.42	0.38	0.07	41.52	14.90	-0.20	24.79	0.01	18.72	-0.31	
2	80100	0.58	0.35	0.05	57.59	10.82	-0.11	11.83	-0.26	19.70	-0.14	
3	80100	0.62	0.39	0.06	62.47	11.98	-0.08	10.83	-0.27	14.65	-0.22	
4	80100	0.70	0.39	0.04	69.94	5.26	-0.16	13.09	-0.18	11.66	-0.24	
5	80100	0.62	0.43	0.06	61.61	7.20	-0.17	23.88	-0.31	7.25	-0.13	
6	80100	0.82	0.36	0.03	81.53	5.25	-0.22	6.53	-0.15	6.65	-0.22	
7	80100	0.37	0.35	0.10	37.39	12.32	-0.18	31.72	-0.04	18.45	-0.23	
8	80100	0.55	0.43	0.06	54.55	11.05	-0.07	24.09	-0.23	10.23	-0.30	
9	80100	0.81	0.33	0.02	80.98	9.52	-0.18	4.86	-0.18	4.62	-0.18	
10	80100	0.60	0.51	0.15	59.87	24.02	-0.33	11.22	-0.22	4.73	-0.17	
11	80100	0.42	0.40	0.07	41.84	9.70	-0.08	23.10	-0.25	25.28	-0.16	
12	80100	0.80	0.39	0.03	80.02	10.40	-0.23	5.75	-0.17	3.81	-0.24	
13	80100	0.69	0.42	0.07	69.02	7.39	-0.12	13.85	-0.23	9.66	-0.28	
14	80100	0.70	0.47	0.07	70.21	11.05	-0.25	13.47	-0.27	5.19	-0.20	
15	80100	0.81	0.44	0.06	81.47	7.99	-0.26	6.28	-0.23	4.19	-0.21	
16	80100	0.71	0.43	0.09	70.87	12.85	-0.26	7.21	-0.23	8.96	-0.17	
17	80100	0.38	0.41	0.06	37.61	25.65	-0.21	21.37	-0.19	15.30	-0.09	
18	80100	0.36	0.31	0.06	35.86	6.97	-0.10	47.29	-0.17	9.81	-0.12	
19	80100	0.53	0.33	0.03	53.46	13.78	-0.22	26.67	-0.13	6.05	-0.13	
20	80100	0.41	0.34	0.09	41.19	41.19	-0.31	8.17	-0.05	9.36	0.01	
21	80100	0.67	0.46	0.09	66.64	13.60	-0.24	10.78	-0.25	8.89	-0.19	
22	80100	0.89	0.35	0.04	89.21	3.37	-0.20	3.52	-0.19	3.85	-0.19	
23	80100	0.44	0.37	0.11	43.95	7.64	-0.09	22.03	-0.03	26.25	-0.33	
24	80100	0.54	0.46	0.04	53.88	16.81	-0.19	18.45	-0.19	10.80	-0.27	
25	80100	0.48	0.43	0.06	48.04	14.66	-0.19	22.83	-0.21	14.40	-0.17	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.28**  
**2007 Spring AIMS Classical Item Analysis**  
**Mathematics NRT Grade 8**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	78596	0.73	0.36	0.02	72.55	4.29	-0.18	13.67	-0.18	9.47	-0.21	
2	78596	0.49	0.41	0.11	48.67	11.57	-0.14	28.59	-0.19	11.06	-0.24	
3	78596	0.80	0.39	0.06	79.79	4.76	-0.12	6.77	-0.27	8.62	-0.22	
4	78596	0.72	0.39	0.09	71.81	6.98	-0.15	10.45	-0.21	10.66	-0.23	
5	78596	0.58	0.49	0.06	58.10	15.42	-0.31	12.85	-0.26	13.55	-0.12	
6	78596	0.72	0.39	0.08	72.23	6.44	-0.24	9.94	-0.22	11.31	-0.16	
7	78596	0.82	0.36	0.02	81.95	1.64	-0.14	13.21	-0.25	3.19	-0.18	
8	78596	0.78	0.45	0.04	77.83	5.56	-0.22	11.23	-0.30	5.34	-0.18	
9	78596	0.56	0.29	0.11	56.36	25.46	-0.05	6.05	-0.23	12.02	-0.21	
10	78596	0.85	0.39	0.03	85.40	4.33	-0.25	3.84	-0.22	6.38	-0.18	
11	78596	0.64	0.44	0.09	63.83	8.67	-0.26	18.60	-0.20	8.82	-0.22	
12	78596	0.79	0.37	0.03	78.95	11.79	-0.20	4.88	-0.20	4.34	-0.21	
13	78596	0.54	0.27	0.05	53.96	8.27	-0.05	10.16	-0.04	27.56	-0.24	
14	78596	0.70	0.37	0.04	70.44	8.83	-0.28	16.14	-0.13	4.54	-0.19	
15	78596	0.36	0.31	0.03	36.30	48.91	-0.05	6.85	-0.27	7.89	-0.21	
16	78596	0.76	0.32	0.03	75.64	7.09	-0.21	11.69	-0.08	5.55	-0.26	
17	78596	0.85	0.33	0.02	84.79	8.25	-0.19	4.29	-0.20	2.65	-0.16	
18	78596	0.50	0.42	0.07	49.76	20.24	-0.17	22.97	-0.19	6.95	-0.24	
19	78596	0.62	0.46	0.05	61.65	4.38	-0.21	29.75	-0.32	4.16	-0.16	
20	78596	0.51	0.40	0.06	51.34	18.33	-0.35	14.15	-0.20	16.12	0.01	
21	78596	0.47	0.31	0.09	47.32	15.27	-0.17	26.49	-0.12	10.83	-0.13	
22	78596	0.35	0.31	0.10	34.96	36.79	-0.26	16.81	-0.10	11.33	0.04	
23	78596	0.60	0.45	0.06	59.96	5.90	-0.21	12.21	-0.23	21.86	-0.22	
24	78596	0.65	0.31	0.08	65.04	10.74	-0.12	9.87	-0.17	14.26	-0.17	
25	78596	0.32	0.25	0.05	32.45	11.33	-0.06	30.90	-0.04	25.25	-0.18	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.29**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 3**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80952	0.93	0.34	0.13	93.36	5.08	-0.27	1.43	-0.20	0.00	0.00	0.00
2	80952	0.75	0.39	0.21	74.87	4.91	-0.24	20.00	-0.29	0.00	0.00	0.00
3	80952	0.85	0.34	0.18	84.86	4.87	-0.23	10.08	-0.23	0.00	0.00	0.00
4	80952	0.94	0.32	0.14	93.84	2.79	-0.24	3.22	-0.21	0.00	0.00	0.00
5	80952	0.80	0.37	0.19	80.24	9.00	-0.25	10.57	-0.24	0.00	0.00	0.00
6	80952	0.72	0.39	0.62	72.27	11.42	-0.29	15.69	-0.22	0.00	0.00	0.00
7	80952	0.53	0.29	1.40	53.26	16.85	-0.25	28.49	-0.10	0.00	0.00	0.00
8	80952	0.61	0.28	0.26	60.57	5.39	-0.25	25.75	-0.08	8.03	-0.16	
9	80952	0.44	0.35	0.36	44.01	29.29	-0.15	13.92	-0.18	12.41	-0.11	
10	80952	0.30	0.30	2.40	30.15	11.70	-0.26	31.90	0.05	23.83	-0.14	
11	80952	0.49	0.29	0.43	48.99	21.60	-0.10	10.28	-0.27	18.69	-0.05	
12	80952	0.62	0.29	0.78	61.61	7.36	-0.28	7.84	-0.07	22.41	-0.11	
13	80952	0.63	0.47	0.48	62.56	10.39	-0.24	11.54	-0.31	10.23	-0.14	
14	80952	0.76	0.50	0.34	75.85	9.51	-0.30	5.53	-0.26	8.76	-0.22	
15	80952	0.63	0.50	0.90	63.44	10.04	-0.26	8.88	-0.26	16.74	-0.23	
16	80952	0.81	0.32	0.84	80.70	7.82	-0.15	5.37	-0.16	5.25	-0.19	
17	80952	0.49	0.27	0.96	48.83	28.99	0.01	11.86	-0.28	9.36	-0.15	
18	80952	0.71	0.52	0.32	71.04	5.43	-0.28	6.86	-0.24	16.36	-0.29	
19	80952	0.71	0.50	0.33	70.57	9.44	-0.26	11.02	-0.26	8.63	-0.23	
20	80952	0.44	0.30	0.77	43.84	16.58	-0.19	24.53	0.01	14.28	-0.23	
21	80952	0.49	0.34	1.48	48.51	21.75	-0.17	10.24	-0.17	18.02	-0.10	
22	80952	0.48	0.48	1.02	47.68	6.45	-0.24	31.41	-0.19	13.43	-0.27	
23	80952	0.59	0.37	1.43	58.60	19.83	-0.13	12.99	-0.25	7.13	-0.18	
24	80952	0.69	0.51	0.99	68.58	7.11	-0.27	12.44	-0.28	10.88	-0.21	
25	80952	0.73	0.33	0.32	72.61	10.85	-0.29	2.31	-0.23	13.90	-0.06	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.30**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80418	0.81	0.41	0.03	80.62	7.89	-0.20	6.70	-0.26	4.75	-0.21	
2	80418	0.83	0.41	0.02	83.07	8.16	-0.21	5.60	-0.27	3.13	-0.21	
3	80418	0.85	0.44	0.06	85.22	10.21	-0.33	1.74	-0.20	2.76	-0.19	
4	80418	0.68	0.33	0.09	67.83	14.81	-0.16	7.38	-0.19	9.88	-0.16	
5	80418	0.94	0.35	0.01	94.09	1.74	-0.18	2.70	-0.22	1.46	-0.20	
6	80418	0.77	0.48	0.11	76.53	11.32	-0.26	4.84	-0.27	7.19	-0.25	
7	80418	0.75	0.42	0.14	75.39	13.84	-0.17	5.54	-0.28	5.06	-0.26	
8	80418	0.90	0.47	0.15	89.71	2.88	-0.26	3.61	-0.24	3.62	-0.28	
9	80418	0.53	0.39	0.20	52.52	9.91	-0.20	18.13	-0.26	19.22	-0.08	
10	80418	0.80	0.44	0.19	80.29	7.96	-0.19	4.60	-0.23	6.93	-0.29	
11	80418	0.75	0.45	0.03	74.62	8.06	-0.23	13.09	-0.27	4.19	-0.23	
12	80418	0.85	0.45	0.03	85.38	3.46	-0.23	4.57	-0.25	6.55	-0.26	
13	80418	0.78	0.46	0.04	77.75	5.66	-0.21	11.55	-0.25	4.97	-0.27	
14	80418	0.57	0.39	0.08	57.08	21.22	-0.20	9.04	-0.25	12.56	-0.12	
15	80418	0.65	0.44	0.07	64.86	12.18	-0.17	6.98	-0.18	15.89	-0.30	
16	80418	0.76	0.36	0.03	76.17	6.81	-0.28	13.74	-0.12	3.24	-0.23	
17	80418	0.70	0.59	0.11	70.43	8.06	-0.25	11.70	-0.30	9.68	-0.35	
18	80418	0.76	0.40	0.14	76.32	11.22	-0.20	8.14	-0.21	4.15	-0.23	
19	80418	0.50	0.20	0.13	49.71	12.44	-0.18	23.13	0.02	14.56	-0.12	
20	80418	0.71	0.55	0.14	71.00	10.58	-0.24	6.62	-0.32	11.64	-0.29	
21	80418	0.40	0.29	0.10	40.31	21.91	-0.11	12.33	-0.17	25.34	-0.09	
22	80418	0.69	0.50	0.12	68.85	9.43	-0.26	10.59	-0.25	11.00	-0.25	
23	80418	0.61	0.55	0.14	60.77	7.67	-0.35	20.78	-0.26	10.61	-0.22	
24	80418	0.60	0.47	0.17	60.33	7.41	-0.23	24.64	-0.22	7.43	-0.27	
25	80418	0.59	0.45	0.23	59.35	26.40	-0.23	7.31	-0.22	6.71	-0.24	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.31**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80999	0.58	0.40	0.09	58.17	8.35	-0.14	8.90	-0.11	24.47	-0.29	
2	80999	0.83	0.33	0.04	83.39	6.81	-0.15	5.53	-0.14	4.22	-0.25	
3	80999	0.51	0.34	0.08	51.31	19.25	-0.28	8.87	-0.05	20.47	-0.11	
4	80999	0.82	0.44	0.06	81.72	3.95	-0.29	9.18	-0.20	5.08	-0.26	
5	80999	0.72	0.38	0.03	72.38	16.56	-0.23	3.91	-0.21	7.12	-0.17	
6	80999	0.74	0.39	0.07	74.16	12.26	-0.19	8.69	-0.19	4.81	-0.26	
7	80999	0.60	0.36	0.08	60.28	14.29	-0.22	4.41	-0.25	20.93	-0.11	
8	80999	0.68	0.42	0.05	67.61	7.81	-0.26	7.57	-0.23	16.95	-0.17	
9	80999	0.83	0.46	0.05	83.37	4.86	-0.26	5.96	-0.24	5.75	-0.24	
10	80999	0.73	0.39	0.02	73.12	16.95	-0.25	3.13	-0.20	6.78	-0.18	
11	80999	0.69	0.44	0.03	68.53	1.81	-0.21	23.82	-0.28	5.79	-0.25	
12	80999	0.89	0.37	0.02	89.49	1.73	-0.20	4.05	-0.21	4.69	-0.22	
13	80999	0.81	0.27	0.04	81.50	2.97	-0.14	3.56	-0.20	11.89	-0.13	
14	80999	0.83	0.47	0.04	83.29	8.94	-0.38	4.06	-0.14	3.66	-0.19	
15	80999	0.51	0.22	0.05	50.60	7.44	-0.15	10.05	-0.18	31.83	-0.03	
16	80999	0.79	0.46	0.03	79.25	4.15	-0.25	8.93	-0.23	7.64	-0.27	
17	80999	0.84	0.49	0.11	83.77	8.30	-0.33	4.51	-0.24	3.30	-0.21	
18	80999	0.70	0.53	0.12	70.08	5.58	-0.24	19.23	-0.32	4.98	-0.26	
19	80999	0.60	0.24	0.05	59.72	10.17	-0.10	23.69	-0.06	6.36	-0.25	
20	80999	0.56	0.44	0.08	55.52	20.80	-0.15	7.78	-0.28	15.80	-0.23	
21	80999	0.44	0.38	0.10	44.26	19.72	-0.15	22.06	-0.16	13.83	-0.17	
22	80999	0.40	0.27	0.09	40.00	14.68	-0.16	18.77	-0.13	26.45	-0.05	
23	80999	0.71	0.47	0.02	71.25	4.31	-0.13	12.39	-0.36	12.02	-0.20	
24	80999	0.60	0.30	0.01	59.53	18.12	-0.24	12.16	-0.03	10.15	-0.14	
25	80999	0.37	0.18	0.04	37.32	27.32	-0.01	21.31	-0.05	13.99	-0.18	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.32**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 6**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80036	0.69	0.39	0.03	69.17	7.66	-0.20	7.18	-0.26	15.95	-0.16	
2	80036	0.82	0.35	0.02	82.20	12.05	-0.19	2.43	-0.20	3.29	-0.23	
3	80036	0.92	0.44	0.03	91.58	2.67	-0.23	3.41	-0.27	2.30	-0.23	
4	80036	0.62	0.37	0.07	62.24	12.43	-0.17	15.84	-0.16	9.42	-0.22	
5	80036	0.74	0.35	0.02	73.96	9.41	-0.21	6.28	-0.12	10.32	-0.20	
6	80036	0.72	0.44	0.08	72.36	6.93	-0.24	16.17	-0.22	4.46	-0.26	
7	80036	0.82	0.42	0.03	81.76	8.48	-0.33	8.25	-0.18	1.48	-0.16	
8	80036	0.88	0.34	0.03	87.70	3.24	-0.20	5.89	-0.17	3.14	-0.20	
9	80036	0.54	0.33	0.05	53.89	24.37	-0.16	5.80	-0.26	15.87	-0.11	
10	80036	0.78	0.32	0.04	77.83	2.60	-0.24	3.37	-0.16	16.14	-0.18	
11	80036	0.57	0.38	0.07	57.14	9.65	-0.20	20.05	-0.15	13.08	-0.21	
12	80036	0.92	0.37	0.06	91.92	3.06	-0.20	2.81	-0.22	2.14	-0.21	
13	80036	0.86	0.47	0.05	86.01	4.27	-0.25	4.62	-0.24	5.06	-0.28	
14	80036	0.84	0.44	0.02	84.14	9.54	-0.37	1.39	-0.17	4.91	-0.14	
15	80036	0.63	0.35	0.03	62.76	14.80	-0.12	12.04	-0.18	10.36	-0.22	
16	80036	0.67	0.29	0.03	66.53	20.32	-0.02	5.07	-0.23	8.04	-0.28	
17	80036	0.79	0.37	0.07	78.83	6.21	-0.19	9.24	-0.21	5.64	-0.20	
18	80036	0.66	0.48	0.03	65.66	12.91	-0.36	14.22	-0.18	7.18	-0.17	
19	80036	0.52	0.33	0.05	52.37	29.41	-0.07	12.38	-0.23	5.77	-0.26	
20	80036	0.64	0.48	0.08	64.40	7.10	-0.28	15.63	-0.23	12.77	-0.22	
21	80036	0.52	0.30	0.05	52.08	33.64	-0.05	8.48	-0.26	5.72	-0.23	
22	80036	0.57	0.38	0.07	56.83	11.67	-0.18	16.17	-0.25	15.24	-0.11	
23	80036	0.47	0.26	0.13	47.00	9.19	-0.19	17.29	-0.11	26.36	-0.07	
24	80036	0.68	0.49	0.10	68.16	12.27	-0.27	9.74	-0.26	9.71	-0.20	
25	80036	0.44	0.26	0.14	43.83	15.12	-0.15	19.90	-0.15	21.00	-0.03	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.33**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 7**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80414	0.91	0.30	0.01	90.62	3.13	-0.13	2.30	-0.13	3.93	-0.22	
2	80414	0.59	0.29	0.02	58.95	33.73	-0.13	4.94	-0.24	2.35	-0.18	
3	80414	0.82	0.42	0.02	82.15	13.48	-0.31	1.76	-0.17	2.57	-0.21	
4	80414	0.72	0.45	0.04	71.63	6.08	-0.26	7.52	-0.27	14.72	-0.19	
5	80414	0.71	0.51	0.10	70.68	6.76	-0.26	9.90	-0.31	12.55	-0.21	
6	80414	0.67	0.52	0.12	66.87	9.12	-0.29	18.09	-0.26	5.79	-0.25	
7	80414	0.69	0.51	0.06	69.15	6.75	-0.26	15.31	-0.28	8.73	-0.24	
8	80414	0.67	0.43	0.07	67.37	18.58	-0.14	7.43	-0.28	6.54	-0.30	
9	80414	0.64	0.41	0.09	63.67	13.53	-0.18	6.31	-0.28	16.39	-0.18	
10	80414	0.57	0.28	0.09	56.52	6.92	-0.23	25.28	-0.10	11.18	-0.12	
11	80414	0.51	0.37	0.36	50.97	29.21	-0.12	7.45	-0.28	12.00	-0.17	
12	80414	0.32	0.22	0.04	32.28	8.41	-0.29	39.90	0.05	19.37	-0.13	
13	80414	0.69	0.56	0.05	69.24	12.43	-0.30	7.71	-0.26	10.56	-0.30	
14	80414	0.67	0.49	0.07	67.49	17.31	-0.21	9.12	-0.31	6.01	-0.27	
15	80414	0.65	0.51	0.06	65.17	10.79	-0.31	12.87	-0.22	11.10	-0.22	
16	80414	0.64	0.53	0.06	63.92	9.69	-0.28	6.52	-0.27	19.80	-0.27	
17	80414	0.67	0.50	0.09	67.23	9.01	-0.30	16.72	-0.23	6.96	-0.25	
18	80414	0.52	0.39	0.09	51.67	22.32	-0.09	13.56	-0.22	12.35	-0.23	
19	80414	0.53	0.44	0.15	52.63	16.58	-0.22	14.01	-0.23	16.62	-0.15	
20	80414	0.33	0.25	0.07	32.67	16.00	-0.24	17.25	-0.15	34.00	0.06	
21	80414	0.59	0.44	0.10	59.31	11.69	-0.23	14.01	-0.19	14.88	-0.22	
22	80414	0.72	0.50	0.38	72.26	11.32	-0.27	9.85	-0.31	6.18	-0.18	
23	80414	0.74	0.44	0.06	73.92	5.87	-0.27	9.93	-0.24	10.19	-0.19	
24	80414	0.64	0.48	0.07	64.05	11.00	-0.22	8.57	-0.27	16.28	-0.23	
25	80414	0.55	0.38	0.07	54.68	11.10	-0.25	12.51	-0.14	21.62	-0.15	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.34**  
**2007 Spring AIMS Classical Item Analysis**  
**Reading NRT Grade 8**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	78938	0.88	0.29	0.04	87.83	1.06	-0.15	4.72	-0.11	6.36	-0.23	
2	78938	0.94	0.31	0.02	94.16	3.46	-0.19	0.72	-0.14	1.64	-0.20	
3	78938	0.87	0.34	0.02	87.24	3.58	-0.21	6.77	-0.17	2.39	-0.20	
4	78938	0.88	0.31	0.02	88.33	5.33	-0.15	1.25	-0.17	5.06	-0.21	
5	78938	0.92	0.25	0.01	91.77	0.57	-0.12	3.45	-0.18	4.20	-0.13	
6	78938	0.62	0.28	0.02	62.37	4.81	-0.25	28.47	-0.11	4.33	-0.16	
7	78938	0.65	0.41	0.06	64.81	14.80	-0.12	9.46	-0.28	10.87	-0.22	
8	78938	0.58	0.41	0.07	58.49	33.44	-0.24	3.66	-0.25	4.34	-0.20	
9	78938	0.58	0.40	0.03	57.59	17.95	-0.18	14.44	-0.18	9.98	-0.22	
10	78938	0.64	0.47	0.13	63.53	13.67	-0.25	16.03	-0.26	6.64	-0.19	
11	78938	0.80	0.44	0.05	80.16	5.69	-0.27	10.17	-0.24	3.93	-0.21	
12	78938	0.56	0.28	0.06	55.80	6.13	-0.29	12.76	-0.18	25.25	-0.02	
13	78938	0.66	0.39	0.05	65.77	8.14	-0.14	10.12	-0.18	15.92	-0.26	
14	78938	0.88	0.46	0.04	88.16	3.25	-0.27	2.90	-0.24	5.63	-0.25	
15	78938	0.72	0.53	0.04	72.29	8.59	-0.22	11.70	-0.31	7.38	-0.27	
16	78938	0.71	0.40	0.05	71.25	9.50	-0.18	5.01	-0.23	14.19	-0.22	
17	78938	0.52	0.36	0.15	52.32	10.36	-0.19	28.77	-0.11	8.38	-0.26	
18	78938	0.82	0.41	0.09	82.23	5.42	-0.20	7.20	-0.21	5.05	-0.24	
19	78938	0.60	0.39	0.04	60.44	12.40	-0.27	6.16	-0.29	20.97	-0.08	
20	78938	0.82	0.49	0.04	81.72	6.89	-0.26	5.78	-0.29	5.56	-0.25	
21	78938	0.41	0.28	0.07	41.13	14.42	-0.10	26.12	-0.13	18.24	-0.11	
22	78938	0.60	0.37	0.33	59.92	11.78	-0.19	14.86	-0.26	13.11	-0.08	
23	78938	0.56	0.24	0.05	55.52	5.54	-0.26	7.44	-0.21	31.44	0.00	
24	78938	0.66	0.42	0.08	66.15	11.64	-0.20	9.57	-0.27	12.55	-0.16	
25	78938	0.63	0.43	0.08	63.00	11.18	-0.19	14.89	-0.20	10.84	-0.24	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.35**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 3**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	80952	0.81	0.37	0.17	81.17	15.73	-0.30	2.91	-0.22	0.00	0.00	0.00
2	80952	0.93	0.30	0.37	93.45	2.80	-0.20	3.37	-0.22	0.00	0.00	0.00
3	80952	0.64	0.20	0.23	64.35	27.53	-0.07	7.87	-0.23	0.00	0.00	0.00
4	80952	0.93	0.30	0.24	93.36	4.57	-0.23	1.84	-0.20	0.00	0.00	0.00
5	80952	0.46	0.16	0.55	45.80	32.59	-0.08	21.06	-0.11	0.00	0.00	0.00
6	80952	0.28	0.17	0.24	28.43	30.02	0.12	24.65	-0.15	16.66	-0.18	
7	80952	0.45	0.24	3.01	44.74	29.96	-0.04	9.78	-0.22	12.47	-0.09	
8	80952	0.75	0.37	0.70	75.12	7.65	-0.21	12.43	-0.22	3.68	-0.17	
9	80952	0.76	0.45	0.51	75.60	7.69	-0.21	11.12	-0.27	5.06	-0.22	
10	80952	0.46	0.09	0.67	46.03	10.21	-0.21	13.75	-0.11	29.34	0.13	
11	80952	0.68	0.41	0.31	68.15	16.74	-0.31	3.50	-0.20	11.28	-0.12	
12	80952	0.42	0.28	0.56	42.47	15.67	-0.08	19.76	-0.10	21.54	-0.16	
13	80952	0.82	0.43	0.37	81.61	9.30	-0.26	4.88	-0.22	3.82	-0.21	
14	80952	0.43	0.07	0.61	42.55	20.84	0.05	11.57	-0.24	24.43	0.06	
15	80952	0.58	0.26	0.40	58.06	14.48	-0.15	16.95	-0.11	10.10	-0.11	
16	80952	0.81	0.39	0.17	80.56	7.93	-0.25	4.08	-0.21	7.16	-0.17	
17	80952	0.81	0.43	0.41	81.33	10.68	-0.27	4.55	-0.23	3.02	-0.21	
18	80952	0.55	0.22	0.90	54.91	19.32	-0.18	15.95	-0.01	8.92	-0.12	
19	80952	0.47	0.17	0.51	46.75	14.41	-0.08	7.83	-0.21	30.49	0.00	
20	80952	0.70	0.36	0.76	70.06	7.25	-0.23	9.69	-0.21	12.24	-0.13	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.36**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 4**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80418	0.82	0.37	0.04	82.29	9.29	-0.20	3.93	-0.23	4.36	-0.18	
2	80418	0.67	0.31	0.06	67.00	14.81	-0.18	7.43	-0.20	10.67	-0.09	
3	80418	0.57	0.28	0.05	56.67	9.76	-0.19	21.51	-0.10	11.93	-0.13	
4	80418	0.57	0.25	0.05	57.11	26.58	-0.12	9.91	-0.13	6.34	-0.13	
5	80418	0.51	0.21	0.08	50.89	13.36	-0.04	12.52	-0.15	23.14	-0.10	
6	80418	0.36	0.16	0.76	35.91	15.47	-0.16	32.68	-0.01	15.18	-0.02	
7	80418	0.78	0.38	0.05	78.04	9.48	-0.19	5.21	-0.24	7.20	-0.18	
8	80418	0.70	0.35	0.06	69.62	9.80	-0.20	7.78	-0.25	12.70	-0.11	
9	80418	0.67	0.34	0.07	67.11	6.64	-0.24	8.22	-0.26	17.94	-0.07	
10	80418	0.72	0.36	0.09	71.78	7.84	-0.22	7.85	-0.25	12.43	-0.11	
11	80418	0.48	0.24	0.10	48.02	29.49	-0.01	7.81	-0.13	14.58	-0.23	
12	80418	0.47	0.13	0.04	46.85	3.66	-0.23	3.64	-0.19	45.80	0.03	
13	80418	0.88	0.33	0.05	88.45	2.27	-0.18	4.02	-0.19	5.21	-0.19	
14	80418	0.72	0.27	0.03	71.57	19.62	-0.10	4.70	-0.20	4.07	-0.19	
15	80418	0.81	0.36	0.04	80.57	7.92	-0.20	6.10	-0.15	5.32	-0.24	
16	80418	0.82	0.37	0.08	81.93	7.32	-0.24	4.44	-0.17	6.21	-0.19	
17	80418	0.91	0.32	0.13	90.63	2.11	-0.19	3.61	-0.17	3.48	-0.18	
18	80418	0.75	0.23	0.06	74.61	4.66	-0.15	6.00	-0.15	14.66	-0.09	
19	80418	0.61	0.26	0.09	61.10	7.12	-0.27	7.38	-0.26	24.29	0.03	
20	80418	0.51	0.19	0.14	50.87	6.95	-0.24	27.86	0.01	14.16	-0.12	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.37**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 5**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%		%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80999	0.58	0.27	0.04	57.55		11.80	-0.12	19.88	-0.08	10.73	-0.20
2	80999	0.62	0.38	0.06	61.71		23.12	-0.18	9.38	-0.24	5.73	-0.16
3	80999	0.53	0.28	0.04	53.39		21.06	-0.10	11.98	-0.11	13.52	-0.19
4	80999	0.67	0.29	0.07	67.03		22.22	-0.13	8.03	-0.17	2.64	-0.21
5	80999	0.75	0.32	0.08	74.88		5.08	-0.20	4.18	-0.22	15.77	-0.13
6	80999	0.62	0.32	0.07	62.24		15.04	-0.17	11.94	-0.11	10.71	-0.19
7	80999	0.91	0.33	0.01	90.63		2.16	-0.16	3.36	-0.22	3.83	-0.18
8	80999	0.73	0.37	0.03	72.95		8.80	-0.19	6.38	-0.24	11.81	-0.15
9	80999	0.67	0.34	0.04	66.89		7.14	-0.19	15.42	-0.12	10.51	-0.22
10	80999	0.56	0.39	0.10	55.53		16.84	-0.22	10.13	-0.21	17.37	-0.12
11	80999	0.59	0.37	0.11	58.81		10.73	-0.22	20.06	-0.15	10.26	-0.17
12	80999	0.60	0.26	0.12	60.13		9.94	-0.18	19.59	-0.05	10.20	-0.16
13	80999	0.60	0.25	0.24	59.87		4.84	-0.22	13.77	-0.10	21.28	-0.10
14	80999	0.57	0.29	0.07	57.31		12.68	-0.06	14.66	-0.18	15.27	-0.16
15	80999	0.64	0.32	0.03	64.33		7.64	-0.19	17.99	-0.10	10.01	-0.21
16	80999	0.73	0.30	0.04	73.04		9.17	-0.16	5.75	-0.22	11.99	-0.11
17	80999	0.35	0.18	0.06	35.32		18.02	-0.08	27.09	-0.06	19.49	-0.08
18	80999	0.63	0.23	0.06	62.93		7.85	-0.16	17.06	-0.04	12.08	-0.17
19	80999	0.74	0.40	0.08	73.79		6.74	-0.20	9.23	-0.18	10.15	-0.25
20	80999	0.56	0.29	0.09	55.99		13.07	-0.15	16.92	-0.14	13.93	-0.13

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.38**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 6**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80036	0.59	0.34	0.07	59.43	5.39	-0.20	22.45	-0.15	12.65	-0.17	
2	80036	0.55	0.39	0.09	55.30	15.79	-0.21	20.49	-0.11	8.31	-0.25	
3	80036	0.53	0.22	0.10	53.43	31.72	0.03	9.32	-0.23	5.42	-0.23	
4	80036	0.55	0.22	0.14	54.80	21.31	-0.06	18.11	-0.10	5.63	-0.19	
5	80036	0.56	0.18	0.15	55.91	12.78	-0.12	10.04	-0.16	21.09	-0.01	
6	80036	0.44	0.21	0.15	44.02	21.07	-0.02	10.52	-0.19	24.24	-0.09	
7	80036	0.80	0.39	0.04	80.49	6.92	-0.21	5.38	-0.24	7.17	-0.18	
8	80036	0.58	0.20	0.07	58.23	27.55	0.00	8.13	-0.18	6.02	-0.20	
9	80036	0.68	0.28	0.10	67.97	8.30	-0.14	7.11	-0.22	16.52	-0.10	
10	80036	0.54	0.14	0.08	53.92	29.48	0.04	4.23	-0.24	12.27	-0.11	
11	80036	0.70	0.35	0.11	69.57	10.84	-0.14	9.59	-0.19	9.87	-0.21	
12	80036	0.65	0.33	0.11	64.69	17.05	-0.15	8.15	-0.19	9.99	-0.16	
13	80036	0.73	0.22	0.04	72.99	4.93	-0.14	15.68	-0.11	6.34	-0.11	
14	80036	0.70	0.37	0.05	69.61	6.99	-0.21	8.35	-0.20	15.00	-0.17	
15	80036	0.42	0.15	0.02	41.66	27.78	-0.04	18.60	-0.03	11.93	-0.14	
16	80036	0.88	0.39	0.03	88.43	4.21	-0.22	4.42	-0.23	2.90	-0.20	
17	80036	0.69	0.38	0.04	68.62	14.95	-0.25	8.82	-0.14	7.56	-0.18	
18	80036	0.78	0.42	0.03	78.39	8.53	-0.22	6.67	-0.22	6.36	-0.23	
19	80036	0.77	0.45	0.05	77.11	8.33	-0.22	5.76	-0.25	8.74	-0.23	
20	80036	0.57	0.27	0.05	57.10	6.52	-0.16	9.22	-0.22	27.11	-0.07	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.39**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 7**

Item	N	P-Value	<i>r</i> pb	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb	%	<i>r</i> pb
1	80414	0.79	0.32	0.02	79.12	3.45	-0.17	3.42	-0.18	13.98	-0.19	
2	80414	0.61	0.12	0.01	61.21	28.73	-0.04	2.56	-0.14	7.49	-0.07	
3	80414	0.75	0.26	0.02	75.29	8.37	-0.03	3.19	-0.15	13.11	-0.23	
4	80414	0.43	0.16	0.05	43.00	11.91	-0.13	9.35	-0.18	35.67	0.04	
5	80414	0.62	0.24	0.07	61.72	15.02	-0.02	7.66	-0.24	15.52	-0.13	
6	80414	0.63	0.28	0.02	62.61	21.25	-0.21	13.45	-0.11	2.67	-0.07	
7	80414	0.53	0.27	0.03	52.83	25.85	-0.12	11.61	-0.10	9.67	-0.18	
8	80414	0.80	0.25	0.01	80.34	3.33	-0.19	8.85	-0.15	7.48	-0.08	
9	80414	0.74	0.34	0.03	73.62	6.59	-0.23	9.08	-0.10	10.68	-0.21	
10	80414	0.68	0.32	0.04	68.36	5.20	-0.19	13.55	-0.15	12.84	-0.16	
11	80414	0.78	0.31	0.04	77.67	3.22	-0.17	10.87	-0.17	8.19	-0.17	
12	80414	0.79	0.36	0.12	78.63	9.68	-0.21	5.22	-0.16	6.33	-0.20	
13	80414	0.78	0.28	0.02	77.81	5.44	-0.20	4.28	-0.16	12.45	-0.11	
14	80414	0.47	0.22	0.05	47.08	40.19	-0.01	6.95	-0.20	5.69	-0.24	
15	80414	0.61	0.28	0.06	60.69	9.81	-0.21	21.35	-0.06	8.08	-0.18	
16	80414	0.75	0.38	0.08	75.14	5.52	-0.22	7.70	-0.24	11.55	-0.16	
17	80414	0.69	0.44	0.14	69.10	11.84	-0.21	7.97	-0.26	10.94	-0.21	
18	80414	0.73	0.47	0.17	72.54	6.75	-0.24	8.65	-0.27	11.87	-0.22	
19	80414	0.50	0.23	0.09	50.13	7.50	-0.24	34.12	-0.02	8.15	-0.15	
20	80414	0.77	0.38	0.14	76.89	8.01	-0.18	7.30	-0.23	7.66	-0.19	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

**Table 6.4.40**  
**2007 Spring AIMS Classical Item Analysis**  
**Language NRT Grade 8**

Item	N	P-Value	<i>r pb</i>	% Omit	Key		Distractor 1		Distractor 2		Distractor 3	
					%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>	%	<i>r pb</i>
1	78938	0.62	0.32	0.10	62.35	14.04	-0.14	12.98	-0.20	10.53	-0.13	
2	78938	0.90	0.31	0.08	90.44	2.14	-0.18	3.16	-0.19	4.17	-0.16	
3	78938	0.37	0.17	0.15	37.23	3.49	-0.19	28.16	-0.01	30.97	-0.09	
4	78938	0.69	0.37	0.09	68.53	13.92	-0.18	9.67	-0.27	7.79	-0.11	
5	78938	0.32	0.14	0.11	31.57	17.70	-0.11	23.90	-0.14	26.72	0.08	
6	78938	0.51	0.23	0.13	51.00	18.96	-0.14	18.83	-0.07	11.06	-0.12	
7	78938	0.53	0.26	0.03	53.02	9.25	-0.18	20.34	-0.11	17.35	-0.09	
8	78938	0.36	0.11	0.06	36.18	16.80	-0.06	34.15	0.06	12.80	-0.17	
9	78938	0.39	0.14	0.03	39.09	14.29	-0.10	19.13	-0.07	27.46	-0.01	
10	78938	0.88	0.38	0.04	87.93	4.44	-0.22	3.28	-0.21	4.29	-0.20	
11	78938	0.56	0.31	0.08	55.63	9.79	-0.08	9.91	-0.16	24.60	-0.19	
12	78938	0.62	0.29	0.14	62.29	9.22	-0.20	11.49	-0.20	16.86	-0.05	
13	78938	0.79	0.37	0.01	79.22	5.38	-0.15	3.11	-0.20	12.28	-0.25	
14	78938	0.82	0.31	0.01	81.72	9.37	-0.20	6.17	-0.15	2.72	-0.16	
15	78938	0.66	0.24	0.05	66.21	15.12	-0.06	10.29	-0.19	8.33	-0.12	
16	78938	0.89	0.30	0.03	89.42	3.23	-0.17	4.47	-0.15	2.85	-0.18	
17	78938	0.68	0.32	0.10	68.46	10.87	-0.12	5.79	-0.21	14.76	-0.17	
18	78938	0.81	0.25	0.02	81.07	11.54	-0.08	4.31	-0.20	3.05	-0.18	
19	78938	0.70	0.33	0.04	69.89	12.14	-0.12	5.93	-0.20	12.00	-0.19	
20	78938	0.69	0.37	0.05	69.30	8.13	-0.23	11.54	-0.17	10.96	-0.17	

Note. Item number is not the item number in test booklet due to the nature of the dual purpose assessment and imbedded field test items. This test included multiple choice items only. The statistics presented in this table are based on a calibration sample, which was near census for this administration.

## Part 7: Calibration, Scaling and Equating

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Part 7 of the technical report describes calibration and scaling procedures and results for the 2007 Spring AIMS assessments. All grade levels and content areas were calibrated and scaled with calibration samples that typically consisted of the entire student population. The exclusion criteria for the calibration samples described in section 6.1. Part 7 of this report addresses the following AERA/APA/NCME standards: 1.13, 2.1, 2.2, 2.14, 4.1, 4.2, 4.3, 6.4, 6.5, and 13.6. Also note that the 2006 Fall AIMS assessment is described in Appendix A.

### 7.1 Calibration Methods

Item Response Theory (IRT) models were used in the item calibration for all reading and mathematics AIMS tests. All tests were calibrated separately by grade and content area. All calibration activities were replicated by ADE staff as an added quality control check.

#### 7.1.1 Calibration Models

The AIMS mathematics and reading criterion-reference components are comprised of multiple-choice items. All items contributed to the AIMS CRT scores, including the *TerraNova* items that served dual purposes, were calibrated using the Rasch model to create the CRT scale. Historically, the AIMS mathematics and reading CRT components have been developed and calibrated using the Rasch Model. The Rasch model (Rasch, 1960; Wright, 1977) can be conceptualized as a one-parameter IRT model in which item difficulty and student ability are estimated on the same scale. The Rasch model defines a multiple-choice item in terms of one parameter: item difficulty. In the Rasch model, the probability that a student with an ability estimate ( $\theta$ ) responds correctly to item  $i$  is

$$P_i(\theta) = \frac{\exp[(\theta - b_i)]}{1 + \exp[(\theta - b_i)]},$$

where  $b_i$  is the item difficulty.

Norm-reference scores are reported based on the students' performance on the NRT component, and items reporting to the AIMS norm-referenced component were calibrated with the three-parameter logistic (3PL) model (Lord & Novick, 1968; Lord, 1980). Norm-referenced items were calibrated during the national standardization of *TerraNova* using the 3PL model, and the parameters used for scoring the AIMS NRT were those obtained during this standardization. Using 3PL model to calibrate the NRT component was necessary in order to preserve the integrity of the norm reference scores.

The 3PL model defines a multiple-choice item in terms of three item parameters: item difficulty or location, item discrimination, and the pseudo-guessing parameter. In the 3PL model, the probability that a student with an ability estimate ( $\theta$ ) responds correctly to item  $i$  is

$$P_i(\theta) = c_i + \frac{1 - c_i}{1 + \exp[-1.7a_i(\theta - b_i)]},$$

where  $a_i$  is the item discrimination,  $b_i$  is the item difficulty, and  $c_i$  is the probability of a correct response by a low-scoring examinee. Norm-referenced items were calibrated during the national standardization of *TerraNova* and parameters used for scoring the AIMS NRT were those obtained during this standardization. Note that the NRT items have not changed over the previous three administrations of the AIMS.

### 7.1.2 Calibration Software

Parameter estimation for items on the criterion-referenced tests using the Rasch model was implemented using Winsteps 3.63.0 (Linacre, 2005b). Winsteps uses joint maximum likelihood estimation (JMLE) as described by Wright and Masters (1982). To estimate the standard error of measurement at the extreme scores, calcSEM\_Rasch.sas (Choi, 2005) was used.

Parameter estimations for the NRT assessment were conducted in 2005 using CTB's PARDUX software (Burket, 1991).

## 7.2 Calibration Results

### 7.2.1 IRT Item Statistics

Item statistics resulting from calibration of the AIMS CRT tests in reading and mathematics are presented in tables 7.2.1.1 through 7.2.1.14. All items for all reading and mathematics tests converged during calibration using typical procedures for Winsteps software. Standard error of estimates for the Rasch difficulty measures indicated that the parameters were well estimated. Model to item data fit was monitored using weighted mean-square (MNSQ) and unweighted MNSQ statistics, which indicate the degree of accuracy and predictability with which the data fits model (Linacre, 2002). In Winsteps and Rasch literature, weighted mean-square is also referred to as infit MNSQ and unweighted mean-square is referred to as outfit MNSQ. The weighted mean-square statistic is sensitive to unexpected responses at or near the item's calibrated level, whereas unweighted mean-square statistics is sensitive to unexpected responses away from the item's calibrated level. Typically, values less than 0.6 and greater than 1.4 for weighted MNSQ indicate misfit, and values greater than 1.4 for unweighted MNSQ indicate misfit (Wright & Linacre, 1994). No items were flagged as having misfit as indicated by weighted MNSQ in any of the content area and grade level tests. Items on 10 of the 14 CRT tests, with between one and five items flagged per test, had misfit as indicated by unweighted MNSQ. Most of these items were identified in the Grade 4 Reading test.

The items that were flagged for unweighted MNSQ include:

1. Math Grade 4 Item 33 unweighted mean-square 1.50,
2. Math Grade 6 Item 7 unweighted mean-square 1.57,
3. Math Grade 7 Item 20 unweighted mean-square 0.58,
4. Math Grade 7 Item 29 unweighted mean-square 1.47,
5. Math Grade 8 Item 30 unweighted mean-square 1.42,
6. Reading Grade 3 Item 8 unweighted mean-square 0.50,
7. Reading Grade 4 Item 4 unweighted mean-square 0.58,
8. Reading Grade 4 Item 20 unweighted mean-square 1.66,
9. Reading Grade 4 Item 24 unweighted mean-square 0.56,
10. Reading Grade 4 Item 25 unweighted mean-square 0.59,

11. Reading Grade 4 Item 27 unweighted mean-square 0.54,
12. Reading Grade 6 Item 5 unweighted mean-square 0.57,
13. Reading Grade 7 Item 10 unweighted mean-square 1.47,
14. Reading Grade 7 Item 13 unweighted mean-square 1.43,
15. Reading Grade 8 Item 2 unweighted mean-square 1.51,
16. Reading HS Item 10 outfit 0.50,
17. Reading HS Item 14 outfit 0.59,
18. Reading HS Item 19 outfit 1.44.

None of the misfit was so extreme as to warrant corrective action during operational analysis.

**Table 7.2.1.1**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 3**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.13	0.01	1.05	1.15	37	0.91	0.01	0.91	0.87
2	-0.82	0.01	1.07	1.25	38	-0.20	0.01	0.97	0.92
3	-0.97	0.01	0.93	0.85	39	1.56	0.01	1.23	1.35
4	-0.26	0.01	1.10	1.18	40	1.72	0.01	1.08	1.24
5	-0.72	0.01	0.86	0.69	41	1.36	0.01	0.98	1.00
6	0.46	0.01	1.07	1.08	42	-1.03	0.01	0.87	0.67
7	-3.79	0.03	0.97	0.69	43	-0.37	0.01	1.06	1.09
8	0.30	0.01	1.06	1.14	44	1.23	0.01	1.06	1.08
9	0.16	0.01	0.91	0.83	45	-0.93	0.01	1.05	1.39
10	0.92	0.01	0.98	0.98	46	-0.95	0.01	1.01	1.02
11	0.07	0.01	1.03	1.03	47	-0.09	0.01	0.94	0.86
12	0.56	0.01	1.09	1.13	48	-1.21	0.01	0.85	0.68
13	-0.35	0.01	1.09	1.08	49	0.95	0.01	1.05	1.08
14	-0.24	0.01	1.00	0.99	50	0.83	0.01	1.11	1.10
15	1.33	0.01	1.13	1.21	51	-0.87	0.01	0.95	1.10
16	-0.83	0.01	1.01	1.07	52	0.59	0.01	0.99	0.96
17	-2.25	0.02	0.96	0.78	53	1.14	0.01	1.08	1.13
18	-1.12	0.01	1.26	1.42	54	0.54	0.01	0.96	0.93
19	-0.01	0.01	0.92	0.81	55	0.12	0.01	1.00	1.02
20	0.76	0.01	0.97	0.95	56	1.21	0.01	0.94	0.93
21	0.63	0.01	0.85	0.79	57	-0.25	0.01	0.81	0.67
22	-0.21	0.01	0.83	0.68	58	1.11	0.01	1.02	1.01
23	0.39	0.01	1.13	1.21	59	-0.78	0.01	0.91	0.83
24	0.56	0.01	1.01	0.99	60	-0.13	0.01	0.87	0.79
25	-0.16	0.01	0.84	0.73	61	0.28	0.01	0.97	0.89
26	-0.94	0.01	0.86	0.74	62	0.68	0.01	0.99	0.97
27	-1.91	0.01	0.90	0.73	63	1.20	0.01	1.03	1.07
28	-0.85	0.01	1.13	1.47	64	-1.13	0.01	0.91	0.77
29	0.46	0.01	1.23	1.40	65	-0.20	0.01	0.88	0.80
30	1.13	0.01	1.10	1.13	66	1.93	0.01	1.18	1.38
31	-0.71	0.01	1.04	1.20	67	1.95	0.01	1.09	1.18
32	1.89	0.01	1.13	1.23	68	0.16	0.01	1.04	1.10
33	-0.77	0.01	0.97	0.89	69	-0.23	0.01	1.10	1.23
34	0.61	0.01	0.96	0.93	70	-0.33	0.01	1.05	1.05
35	-0.36	0.01	1.12	1.17	71	1.83	0.01	1.07	1.11
36	0.40	0.01	0.90	0.84	72	1.14	0.01	1.17	1.28

**Table 7.2.1.2**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 4**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.23	0.01	0.88	0.79	36	-1.79	0.02	0.92	0.71
2	0.19	0.01	1.11	1.32	37	-0.66	0.01	0.90	0.75
3	-1.05	0.01	0.92	1.02	38	0.26	0.01	1.08	1.09
4	-0.35	0.01	0.97	0.84	39	-1.07	0.01	0.91	0.77
5	0.67	0.01	1.14	1.23	40	1.09	0.01	1.17	1.25
6	-0.80	0.01	0.91	0.87	41	1.69	0.01	1.16	1.27
7	0.70	0.01	1.04	1.00	42	-0.47	0.01	1.08	1.28
8	-0.86	0.01	0.98	0.98	43	0.23	0.01	1.08	1.07
9	1.03	0.01	1.03	1.04	44	0.39	0.01	0.90	0.83
10	-0.53	0.01	0.88	0.70	45	0.86	0.01	0.93	0.88
11	-0.60	0.01	0.79	0.56	46	-0.01	0.01	1.08	1.06
12	0.49	0.01	0.97	0.93	47	1.34	0.01	1.04	1.06
13	0.49	0.01	1.04	1.02	48	0.70	0.01	0.90	0.83
14	-0.71	0.01	1.00	0.91	49	-0.29	0.01	1.15	1.31
15	0.61	0.01	1.09	1.16	50	0.45	0.01	1.15	1.23
16	-0.38	0.01	0.81	0.65	51	-0.04	0.01	1.08	1.22
17	1.34	0.01	1.08	1.11	52	-0.78	0.01	1.05	1.06
18	-0.78	0.01	0.95	1.02	53	0.33	0.01	0.99	0.94
19	0.92	0.01	1.04	1.03	54	-0.10	0.01	0.83	0.67
20	1.16	0.01	1.12	1.19	55	-0.98	0.01	1.05	0.99
21	0.61	0.01	0.95	0.89	56	0.16	0.01	0.92	0.81
22	1.29	0.01	1.24	1.32	57	0.07	0.01	0.84	0.72
23	2.14	0.01	1.11	1.26	58	0.88	0.01	0.96	0.95
24	-0.27	0.01	1.20	1.45	59	0.53	0.01	0.99	0.96
25	0.01	0.01	1.06	1.22	60	1.45	0.01	1.13	1.19
26	-0.70	0.01	1.03	1.20	61	0.33	0.01	0.98	0.91
27	-0.25	0.01	1.04	1.23	62	-1.31	0.01	0.99	0.94
28	0.06	0.01	0.88	0.75	63	1.16	0.01	0.94	0.91
29	0.95	0.01	0.89	0.87	64	-0.36	0.01	1.10	1.18
30	-0.87	0.01	0.87	0.76	65	0.96	0.01	1.05	1.05
31	-0.05	0.01	0.85	0.73	66	0.94	0.01	1.04	1.04
32	0.13	0.01	0.92	0.82	67	-1.31	0.01	0.98	0.82
33	-0.21	0.01	0.86	0.76	68	0.99	0.01	1.31	1.50
34	-0.19	0.01	0.93	0.86	69	0.53	0.01	1.02	0.97
35	-1.01	0.01	1.02	1.25	70	1.63	0.01	1.02	1.06

**Table 7.2.1.3**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 5**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.22	0.01	1.16	1.38	35	1.30	0.01	1.04	1.05
2	0.52	0.01	1.27	1.42	36	-1.21	0.01	0.95	0.73
3	0.84	0.01	1.13	1.14	37	-0.61	0.01	0.90	0.86
4	-1.05	0.01	1.06	1.10	38	0.11	0.01	0.95	0.83
5	-0.26	0.01	0.95	0.95	39	1.47	0.01	0.92	0.93
6	-1.12	0.01	0.93	0.74	40	0.56	0.01	0.93	0.88
7	0.53	0.01	1.00	1.02	41	-0.56	0.01	1.06	0.97
8	-1.17	0.01	1.15	1.34	42	0.74	0.01	0.97	0.92
9	0.35	0.01	0.93	0.86	43	-0.90	0.01	0.89	0.71
10	0.24	0.01	1.09	1.21	44	-0.18	0.01	1.00	1.04
11	-0.86	0.01	1.16	1.46	45	1.03	0.01	1.01	1.03
12	-0.28	0.01	1.02	1.18	46	0.84	0.01	1.11	1.16
13	-0.36	0.01	0.93	0.97	47	-0.15	0.01	0.92	0.84
14	0.65	0.01	1.04	1.03	48	0.83	0.01	1.08	1.09
15	0.42	0.01	1.05	1.24	49	0.49	0.01	1.00	0.96
16	0.63	0.01	0.82	0.75	50	-1.12	0.01	0.95	0.92
17	-1.47	0.01	1.07	0.87	51	0.41	0.01	0.82	0.71
18	-0.10	0.01	1.03	1.07	52	1.12	0.01	1.04	1.04
19	0.98	0.01	1.03	1.03	53	0.85	0.01	0.83	0.77
20	0.31	0.01	1.10	1.10	54	0.85	0.01	1.03	1.02
21	-0.12	0.01	1.01	0.93	55	0.21	0.01	0.98	0.89
22	-0.44	0.01	0.82	0.66	56	0.61	0.01	1.10	1.17
23	-0.18	0.01	1.02	1.09	57	-0.30	0.01	0.83	0.70
24	0.12	0.01	0.83	0.73	58	-1.73	0.01	0.97	0.72
25	0.88	0.01	0.96	0.92	59	0.68	0.01	1.09	1.15
26	-0.75	0.01	0.97	0.93	60	-0.89	0.01	0.91	0.88
27	-0.50	0.01	0.84	0.66	61	-0.24	0.01	0.95	0.94
28	-1.64	0.01	1.01	1.24	62	0.94	0.01	1.13	1.21
29	0.46	0.01	1.11	1.17	63	0.80	0.01	1.02	1.01
30	0.57	0.01	1.04	1.05	64	1.79	0.01	1.06	1.16
31	0.44	0.01	1.08	1.17	65	-0.15	0.01	0.84	0.70
32	2.04	0.01	1.12	1.28	66	0.67	0.01	1.11	1.12
33	0.88	0.01	1.18	1.30	67	0.86	0.01	1.08	1.07
34	1.45	0.01	1.12	1.19	68	0.83	0.01	1.06	1.09

**Table 7.2.1.4**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 6**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.92	0.01	1.00	0.97	35	1.14	0.01	1.15	1.22
2	1.13	0.01	0.92	0.90	36	0.18	0.01	0.94	0.94
3	-0.62	0.01	1.14	1.25	37	-0.57	0.01	0.89	0.88
4	0.83	0.01	1.19	1.31	38	-0.21	0.01	0.89	0.79
5	-0.64	0.01	0.99	1.01	39	0.54	0.01	1.00	0.98
6	-1.46	0.01	0.79	0.73	40	0.67	0.01	1.17	1.22
7	0.52	0.01	0.94	0.93	41	-1.22	0.01	1.22	1.57
8	0.31	0.01	0.96	0.90	42	2.49	0.01	0.92	1.00
9	2.44	0.01	1.15	1.38	43	0.20	0.01	0.85	0.79
10	-0.27	0.01	1.14	1.22	44	0.54	0.01	1.15	1.27
11	-0.34	0.01	0.93	0.93	45	0.12	0.01	0.84	0.72
12	-0.15	0.01	0.96	0.98	46	0.51	0.01	1.03	1.08
13	-0.83	0.01	0.95	0.91	47	-0.37	0.01	0.85	0.71
14	0.38	0.01	0.87	0.82	48	0.95	0.01	1.05	1.07
15	0.09	0.01	1.05	1.09	49	-0.99	0.01	0.86	0.75
16	0.79	0.01	0.94	0.90	50	1.36	0.01	1.21	1.28
17	0.28	0.01	0.97	0.92	51	-0.10	0.01	1.00	1.00
18	0.42	0.01	1.01	0.96	52	0.52	0.01	1.12	1.22
19	0.29	0.01	0.96	0.90	53	0.11	0.01	1.10	1.11
20	0.91	0.01	1.05	1.06	54	0.66	0.01	1.02	0.98
21	-0.57	0.01	0.89	0.73	55	-1.15	0.01	1.18	1.61
22	-2.00	0.01	0.90	0.87	56	-0.21	0.01	1.03	1.17
23	-0.35	0.01	1.16	1.52	57	0.30	0.01	0.90	0.80
24	-0.34	0.01	1.02	1.07	58	0.09	0.01	1.00	0.98
25	-0.02	0.01	0.87	0.78	59	-0.16	0.01	0.92	0.78
26	-0.57	0.01	0.93	0.91	60	-0.28	0.01	0.96	0.92
27	-0.10	0.01	0.97	0.95	61	0.74	0.01	1.01	1.01
28	0.09	0.01	1.13	1.21	62	0.40	0.01	1.01	1.00
29	0.22	0.01	1.00	1.07	63	0.94	0.01	1.11	1.15
30	-0.28	0.01	0.90	0.79	64	0.14	0.01	1.05	1.06
31	-0.38	0.01	1.03	1.32	65	-0.27	0.01	0.99	1.07
32	-2.23	0.02	0.93	0.80	66	1.21	0.01	1.03	1.06
33	0.37	0.01	0.98	0.99	67	0.19	0.01	0.88	0.81
34	-0.13	0.01	0.99	1.00	68	-0.82	0.01	1.03	0.99

**Table 7.2.1.5**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 7**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.93	0.01	0.92	0.90	35	-0.52	0.01	0.96	0.96
2	1.10	0.01	1.15	1.19	36	0.22	0.01	0.99	0.96
3	-0.07	0.01	1.20	1.34	37	0.15	0.01	0.93	0.83
4	-0.24	0.01	0.94	0.90	38	-0.63	0.01	0.85	0.70
5	-0.14	0.01	1.06	1.13	39	0.11	0.01	0.95	0.86
6	0.18	0.01	0.97	0.91	40	1.94	0.01	1.01	1.12
7	-1.26	0.01	1.08	1.07	41	0.01	0.01	0.89	0.77
8	0.17	0.01	1.04	1.07	42	0.54	0.01	1.03	1.03
9	0.65	0.01	1.03	1.04	43	0.98	0.01	1.17	1.24
10	-0.31	0.01	1.01	0.99	44	2.04	0.01	1.16	1.33
11	-1.06	0.01	1.05	1.05	45	1.09	0.01	1.16	1.24
12	0.88	0.01	0.90	0.86	46	1.70	0.01	1.21	1.41
13	0.39	0.01	0.99	0.93	47	-0.07	0.01	0.95	0.93
14	1.29	0.01	1.16	1.25	48	0.51	0.01	0.97	0.94
15	-0.63	0.01	0.93	1.00	49	-1.37	0.01	0.89	0.73
16	-0.60	0.01	0.94	0.98	50	0.02	0.01	0.84	0.74
17	1.95	0.01	1.10	1.32	51	-0.37	0.01	0.82	0.63
18	1.03	0.01	1.04	1.07	52	-0.59	0.01	0.84	0.70
19	-1.12	0.01	1.03	0.94	53	-1.16	0.01	0.94	1.00
20	-0.16	0.01	0.91	0.81	54	-0.57	0.01	0.76	0.58
21	0.48	0.01	1.14	1.17	55	-0.60	0.01	0.96	0.92
22	-0.41	0.01	1.08	1.00	56	0.45	0.01	1.10	1.16
23	-0.40	0.01	1.02	1.18	57	-0.37	0.01	0.96	0.88
24	0.76	0.01	0.92	0.87	58	1.22	0.01	1.17	1.26
25	0.09	0.01	0.96	0.89	59	0.50	0.01	1.06	1.05
26	-1.21	0.01	1.04	1.05	60	0.69	0.01	1.13	1.17
27	0.32	0.01	1.07	1.12	61	1.24	0.01	1.06	1.12
28	-0.65	0.01	1.06	1.14	62	-0.26	0.01	0.90	0.81
29	-1.18	0.01	0.85	0.67	63	-0.46	0.01	1.23	1.47
30	0.74	0.01	0.93	0.87	64	1.42	0.01	0.94	0.94
31	-0.65	0.01	0.97	1.05	65	0.00	0.01	1.03	1.05
32	0.56	0.01	0.95	0.87	66	0.81	0.01	1.02	1.02
33	-0.20	0.01	0.89	0.76	67	-0.99	0.01	0.96	1.06
34	-0.36	0.01	1.10	1.23	68	-0.16	0.01	0.86	0.77

**Table 7.2.1.6**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics Grade 8**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.95	0.01	1.02	1.02	34	-0.74	0.01	1.06	1.00
2	0.47	0.01	1.10	1.15	35	1.77	0.01	1.11	1.24
3	0.28	0.01	1.02	0.97	36	1.84	0.01	1.13	1.30
4	-1.31	0.01	0.83	0.75	37	-0.42	0.01	1.04	1.34
5	-0.14	0.01	0.98	0.94	38	0.75	0.01	0.97	0.97
6	0.86	0.01	1.06	1.06	39	-0.38	0.01	1.13	1.31
7	0.68	0.01	1.10	1.10	40	0.18	0.01	0.97	0.95
8	-1.18	0.01	0.86	0.66	41	-0.26	0.01	1.13	1.28
9	0.28	0.01	1.06	1.02	42	-1.77	0.01	0.96	0.84
10	-1.19	0.01	0.81	0.55	43	0.75	0.01	0.93	0.90
11	-0.22	0.01	1.03	1.05	44	0.41	0.01	0.94	0.88
12	1.10	0.01	1.00	1.02	45	0.35	0.01	0.81	0.72
13	0.15	0.01	0.98	0.98	46	0.96	0.01	1.03	1.07
14	-0.71	0.01	0.96	0.90	47	-0.28	0.01	1.04	1.19
15	-0.90	0.01	1.02	0.96	48	0.33	0.01	1.00	0.93
16	-0.82	0.01	1.08	1.11	49	0.43	0.01	0.95	0.94
17	-0.55	0.01	0.97	1.01	50	0.25	0.01	1.08	1.06
18	0.00	0.01	0.94	0.84	51	-1.18	0.01	0.87	0.61
19	0.16	0.01	0.93	0.89	52	0.24	0.01	0.98	0.92
20	0.54	0.01	0.80	0.71	53	1.84	0.01	1.10	1.26
21	-0.23	0.01	0.93	0.91	54	1.01	0.01	1.00	0.99
22	-0.25	0.01	0.89	0.86	55	-0.13	0.01	0.99	0.99
23	-0.87	0.01	0.97	0.93	56	-0.33	0.01	0.78	0.66
24	-0.57	0.01	0.90	0.85	57	-1.23	0.01	0.91	0.92
25	0.38	0.01	1.05	1.05	58	-0.35	0.01	1.07	1.10
26	0.79	0.01	1.04	1.03	59	-0.04	0.01	0.99	0.97
27	2.03	0.01	1.11	1.31	60	0.54	0.01	1.03	1.07
28	-1.17	0.01	0.89	0.82	61	-0.24	0.01	1.06	1.15
29	1.27	0.01	1.22	1.33	62	0.26	0.01	1.16	1.24
30	1.48	0.01	0.98	1.03	63	1.99	0.01	1.19	1.42
31	0.29	0.01	1.06	1.07	64	-0.70	0.01	0.97	0.83
32	-0.65	0.01	0.97	0.99	65	-0.16	0.01	0.88	0.81
33	1.09	0.01	1.08	1.12	66	-0.76	0.01	0.93	0.87

**Table 7.2.1.7**  
**2007 Spring AIMS IRT Item Statistics**  
**Mathematics High School**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.32	0.01	0.86	0.82	43	-0.22	0.01	0.94	0.91
2	0.91	0.01	1.01	1.01	44	1.09	0.01	1.09	1.12
3	-1.81	0.01	1.00	1.07	45	0.90	0.01	0.99	0.98
4	-1.74	0.01	0.95	0.93	46	-0.09	0.01	1.08	1.34
5	0.95	0.01	1.01	0.99	47	-0.48	0.01	0.88	0.77
6	-0.02	0.01	0.91	0.84	48	0.82	0.01	1.16	1.29
7	0.66	0.01	1.10	1.12	49	-0.14	0.01	0.93	0.84
8	-0.59	0.01	0.85	0.73	50	-0.56	0.01	0.95	0.92
9	0.80	0.01	0.98	0.96	51	-0.11	0.01	0.95	0.86
10	0.87	0.01	1.03	1.03	52	0.52	0.01	1.04	1.05
11	-0.31	0.01	0.90	0.81	53	1.17	0.01	1.12	1.19
12	-0.90	0.01	0.76	0.60	54	-0.18	0.01	0.93	0.88
13	-0.05	0.01	0.94	0.84	55	1.62	0.01	1.12	1.23
14	-0.07	0.01	1.04	1.07	56	1.23	0.01	0.83	0.80
15	0.33	0.01	1.04	1.09	57	-1.14	0.01	1.13	1.16
16	-1.31	0.01	0.94	0.76	58	-0.79	0.01	0.92	0.86
17	-0.50	0.01	0.96	0.97	59	0.87	0.01	1.06	1.05
18	0.90	0.01	1.07	1.08	60	1.13	0.01	1.19	1.24
19	1.36	0.01	1.29	1.46	61	0.38	0.01	0.95	0.93
20	0.70	0.01	1.07	1.05	62	1.40	0.01	1.13	1.20
21	-1.48	0.01	0.88	0.69	63	1.84	0.01	1.19	1.34
22	-0.46	0.01	0.81	0.65	64	1.02	0.01	1.10	1.15
23	0.32	0.01	0.95	0.94	65	0.32	0.01	1.07	1.07
24	0.12	0.01	0.92	0.91	66	0.22	0.01	1.04	1.04
25	1.03	0.01	1.08	1.12	67	1.04	0.01	1.09	1.10
26	-1.87	0.01	0.77	0.69	68	0.58	0.01	1.14	1.17
27	-1.18	0.01	0.94	0.76	69	1.87	0.01	1.17	1.37
28	0.45	0.01	0.86	0.83	70	-1.03	0.01	0.96	0.98
29	-0.75	0.01	0.87	0.69	71	1.11	0.01	1.10	1.14
30	-0.14	0.01	0.84	0.72	72	-0.58	0.01	0.92	0.85
31	-0.11	0.01	0.82	0.70	73	-1.33	0.01	0.87	0.69
32	-0.20	0.01	0.97	0.96	74	0.23	0.01	0.97	0.98
33	0.61	0.01	1.06	1.12	75	0.21	0.01	0.99	0.97
34	-0.46	0.01	0.89	0.77	76	-0.23	0.01	0.88	0.75
35	-0.05	0.01	0.89	0.81	77	0.24	0.01	1.00	0.99
36	0.88	0.01	0.99	0.99	78	0.59	0.01	1.12	1.18
37	0.75	0.01	1.02	1.02	79	-0.22	0.01	0.87	0.77
38	0.58	0.01	0.94	0.89	80	-0.71	0.01	0.90	0.77
39	-0.35	0.01	1.00	1.14	81	1.20	0.01	1.17	1.23
40	0.60	0.01	1.04	1.10	82	0.47	0.01	1.16	1.25
41	0.70	0.01	1.06	1.08	83	0.57	0.01	1.02	0.98
42	-0.03	0.01	1.00	1.00	84	-1.23	0.01	0.92	0.90

**Table 7.2.1.8**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 3**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-2.10	0.01	0.89	0.56	28	0.69	0.01	1.00	0.98
2	-1.05	0.01	0.99	1.03	29	-0.72	0.01	0.84	0.68
3	-2.19	0.02	0.90	0.64	30	0.57	0.01	1.12	1.14
4	-0.66	0.01	0.99	0.99	31	1.23	0.01	0.94	0.98
5	-0.04	0.01	0.92	0.83	32	-0.34	0.01	0.88	0.78
6	0.39	0.01	1.11	1.10	33	-0.03	0.01	0.86	0.77
7	-0.80	0.01	0.94	0.90	34	0.00	0.01	0.89	0.80
8	-0.07	0.01	1.07	1.16	35	-1.83	0.01	0.87	0.50
9	-0.51	0.01	0.90	0.76	36	-0.54	0.01	0.91	0.77
10	0.94	0.01	1.02	1.02	37	0.26	0.01	1.12	1.30
11	-1.49	0.01	0.87	0.72	38	-0.46	0.01	0.88	0.77
12	-0.83	0.01	0.84	0.73	39	-1.22	0.01	0.92	0.84
13	0.41	0.01	1.00	1.01	40	-0.33	0.01	1.18	1.35
14	0.55	0.01	0.97	0.94	41	1.47	0.01	1.05	1.14
15	1.68	0.01	1.06	1.18	42	1.26	0.01	0.92	0.94
16	2.23	0.01	1.08	1.28	43	0.68	0.01	1.08	1.07
17	0.19	0.01	1.06	1.08	44	0.12	0.01	0.89	0.78
18	0.57	0.01	1.39	1.71	45	-0.13	0.01	1.09	1.24
19	0.15	0.01	0.88	0.82	46	1.45	0.01	1.18	1.31
20	0.87	0.01	1.07	1.09	47	0.47	0.01	1.11	1.20
21	0.55	0.01	1.00	0.96	48	1.44	0.01	0.94	0.98
22	-0.60	0.01	0.86	0.79	49	0.67	0.01	0.98	0.96
23	0.56	0.01	1.33	1.60	50	0.88	0.01	0.96	0.95
24	-0.64	0.01	0.93	0.85	51	0.28	0.01	0.85	0.75
25	1.77	0.01	1.30	1.49	52	0.00	0.01	0.96	1.02
26	0.30	0.01	0.95	0.92	53	-0.03	0.01	1.04	1.06
27	-0.11	0.01	0.91	0.82	54	-0.59	0.01	0.79	0.60

**Table 7.2.1.9**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 4**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.10	0.01	0.94	0.92	28	-0.24	0.01	0.85	0.69
2	0.00	0.01	1.23	1.33	29	0.38	0.01	0.90	0.82
3	0.54	0.01	0.98	0.93	30	0.15	0.01	0.95	0.87
4	1.12	0.01	1.24	1.37	31	-0.63	0.01	0.79	0.58
5	-0.65	0.01	0.93	0.79	32	0.04	0.01	0.82	0.70
6	0.10	0.01	1.20	1.30	33	-0.36	0.01	1.03	1.06
7	0.40	0.01	0.94	0.88	34	0.00	0.01	0.87	0.75
8	-1.10	0.01	0.91	0.80	35	0.62	0.01	0.87	0.82
9	2.30	0.01	1.19	1.75	36	-0.46	0.01	0.89	0.76
10	0.27	0.01	1.48	1.84	37	0.41	0.01	1.07	1.05
11	-0.20	0.01	0.87	0.73	38	-0.15	0.01	0.92	0.78
12	-0.32	0.01	1.08	1.28	39	0.83	0.01	0.94	0.91
13	0.22	0.01	1.02	1.00	40	0.25	0.01	0.91	0.82
14	1.36	0.01	1.15	1.27	41	-0.18	0.01	1.07	1.06
15	-0.38	0.01	0.95	0.85	42	0.25	0.01	1.01	1.01
16	-0.30	0.01	1.04	1.11	43	0.43	0.01	0.99	1.01
17	-1.60	0.01	0.84	0.60	44	-0.14	0.01	1.04	1.05
18	1.09	0.01	1.10	1.15	45	-0.07	0.01	0.93	0.80
19	-0.24	0.01	1.00	0.96	46	1.05	0.01	0.95	0.97
20	-1.12	0.01	0.93	0.82	47	1.86	0.01	1.29	1.66
21	-0.47	0.01	0.98	0.96	48	0.00	0.01	1.05	1.02
22	0.83	0.01	1.12	1.16	49	-1.20	0.01	0.85	0.68
23	0.38	0.01	1.04	1.04	50	-0.76	0.01	0.95	1.22
24	-0.35	0.01	1.11	1.26	51	-1.22	0.01	0.82	0.56
25	0.93	0.01	1.15	1.24	52	-1.06	0.01	0.80	0.59
26	-0.88	0.01	0.86	0.68	53	-0.26	0.01	0.91	0.81
27	-0.38	0.01	0.85	0.70	54	-1.58	0.01	0.80	0.54

**Table 7.2.1.10**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 5**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-0.56	0.01	0.99	0.97	28	-0.15	0.01	0.88	0.77
2	-2.04	0.01	1.02	0.85	29	0.44	0.01	1.01	0.99
3	-0.66	0.01	0.88	0.75	30	0.24	0.01	1.02	1.00
4	0.68	0.01	1.23	1.33	31	0.77	0.01	1.11	1.15
5	-0.96	0.01	0.88	0.72	32	-1.28	0.01	0.99	0.96
6	0.48	0.01	1.00	0.99	33	0.18	0.01	1.04	1.06
7	-0.92	0.01	1.01	1.01	34	0.30	0.01	0.90	0.84
8	-0.14	0.01	0.99	1.01	35	0.32	0.01	1.03	1.05
9	0.54	0.01	1.05	1.04	36	0.23	0.01	1.00	0.97
10	0.14	0.01	0.97	0.92	37	0.00	0.01	0.83	0.73
11	-0.92	0.01	0.87	0.70	38	0.57	0.01	1.19	1.22
12	0.50	0.01	1.02	1.02	39	0.79	0.01	0.96	0.94
13	-0.27	0.01	0.85	0.73	40	1.58	0.01	1.10	1.22
14	0.53	0.01	0.91	0.87	41	-0.07	0.01	0.91	0.85
15	0.33	0.01	0.88	0.81	42	0.58	0.01	1.13	1.15
16	0.12	0.01	1.00	0.99	43	0.44	0.01	1.23	1.34
17	0.62	0.01	0.93	0.91	44	0.60	0.01	1.11	1.14
18	0.53	0.01	1.07	1.09	45	-1.18	0.01	0.91	0.80
19	0.89	0.01	0.97	0.96	46	0.98	0.01	1.09	1.12
20	0.56	0.01	1.15	1.24	47	-0.67	0.01	0.86	0.74
21	0.48	0.01	0.90	0.85	48	0.37	0.01	1.18	1.28
22	-0.18	0.01	0.92	0.84	49	0.83	0.01	1.14	1.20
23	-0.18	0.01	0.98	1.02	50	1.11	0.01	1.22	1.31
24	0.09	0.01	0.96	0.89	51	0.04	0.01	0.87	0.78
25	-0.91	0.01	0.86	0.75	52	0.27	0.01	1.02	1.03
26	1.04	0.01	1.22	1.29	53	-0.59	0.01	0.81	0.65
27	0.42	0.01	0.95	0.94	54	-1.19	0.01	0.85	0.64

**Table 7.2.1.11**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 6**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.03	0.01	1.02	1.01	28	0.53	0.01	1.12	1.18
2	-1.85	0.01	0.85	0.54	29	1.68	0.01	1.09	1.23
3	-0.97	0.01	0.93	0.86	30	1.19	0.01	1.17	1.27
4	0.30	0.01	1.07	1.06	31	0.43	0.01	1.14	1.21
5	1.06	0.01	1.12	1.17	32	-1.62	0.01	0.83	0.57
6	-0.76	0.01	0.85	0.70	33	0.23	0.01	0.91	0.91
7	-0.16	0.01	0.95	0.91	34	0.94	0.01	1.08	1.11
8	-0.82	0.01	0.93	0.88	35	0.30	0.01	0.90	0.83
9	-1.37	0.01	0.98	0.98	36	0.01	0.01	1.02	0.97
10	-0.53	0.01	1.06	1.15	37	0.14	0.01	0.93	0.86
11	-1.90	0.01	0.89	0.73	38	-0.04	0.01	1.21	1.34
12	-1.20	0.01	0.85	0.69	39	1.03	0.01	1.18	1.26
13	-0.03	0.01	0.92	0.82	40	0.13	0.01	1.01	0.99
14	-0.27	0.01	0.83	0.68	41	0.82	0.01	0.98	0.97
15	0.66	0.01	1.05	1.08	42	1.30	0.01	1.11	1.23
16	-0.03	0.01	0.92	0.84	43	1.26	0.01	1.11	1.19
17	1.30	0.01	1.09	1.15	44	0.81	0.01	1.05	1.06
18	-0.74	0.01	0.98	0.80	45	1.27	0.01	1.14	1.25
19	-0.29	0.01	0.82	0.66	46	-0.31	0.01	0.97	0.94
20	-0.08	0.01	1.08	1.11	47	-0.36	0.01	0.89	0.82
21	-1.02	0.01	0.90	0.86	48	-0.02	0.01	1.12	1.21
22	0.29	0.01	0.99	0.97	49	0.09	0.01	0.87	0.77
23	0.18	0.01	1.15	1.32	50	1.38	0.01	1.14	1.26
24	-0.60	0.01	1.00	0.99	51	0.50	0.01	1.02	1.04
25	-1.32	0.01	0.83	0.67	52	-0.23	0.01	0.80	0.65
26	-0.89	0.01	1.03	0.92	53	1.36	0.01	1.06	1.17
27	0.20	0.01	0.89	0.83	54	0.94	0.01	1.02	1.03

**Table 7.2.1.12**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 7**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.73	0.01	0.94	0.91	28	0.97	0.01	1.07	1.11
2	0.57	0.01	1.17	1.23	29	0.99	0.01	1.08	1.14
3	-0.88	0.01	0.90	0.74	30	0.10	0.01	0.92	0.85
4	-0.14	0.01	0.93	0.87	31	0.30	0.01	0.89	0.81
5	-0.42	0.01	1.04	1.01	32	0.63	0.01	1.02	1.07
6	-0.39	0.01	0.96	0.91	33	-0.47	0.01	0.92	0.81
7	0.15	0.01	0.97	0.93	34	0.70	0.01	1.12	1.18
8	-1.11	0.01	0.80	0.64	35	-0.06	0.01	0.94	0.90
9	0.32	0.01	1.09	1.10	36	0.12	0.01	0.90	0.81
10	-0.12	0.01	0.93	0.87	37	1.98	0.01	1.13	1.47
11	-0.11	0.01	1.18	1.44	38	0.91	0.01	1.08	1.13
12	-0.79	0.01	0.92	0.82	39	0.13	0.01	1.11	1.12
13	-0.72	0.01	1.06	1.35	40	0.98	0.01	1.29	1.43
14	0.19	0.01	0.92	0.90	41	-0.21	0.01	0.97	0.98
15	-0.49	0.01	0.96	0.95	42	-0.35	0.01	0.98	0.93
16	0.16	0.01	0.97	0.95	43	-0.02	0.01	1.04	1.10
17	-1.37	0.01	0.92	0.95	44	-0.63	0.01	0.93	0.96
18	0.64	0.01	0.84	0.78	45	0.13	0.01	1.01	1.03
19	0.49	0.01	0.97	0.93	46	0.45	0.01	0.95	0.91
20	0.90	0.01	1.18	1.25	47	-0.58	0.01	0.86	0.70
21	-0.16	0.01	0.85	0.73	48	1.28	0.01	1.04	1.10
22	0.01	0.01	0.89	0.83	49	0.12	0.01	1.01	1.02
23	0.11	0.01	0.99	1.04	50	-0.31	0.01	0.89	0.84
24	0.70	0.01	1.19	1.25	51	0.77	0.01	1.04	1.05
25	0.28	0.01	1.02	1.01	52	-0.18	0.01	0.88	0.80
26	0.11	0.01	1.01	1.00	53	-0.29	0.01	0.97	0.91
27	1.28	0.01	1.02	1.08	54	0.80	0.01	1.06	1.07

**Table 7.2.1.13**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading Grade 8**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	-1.53	0.01	0.99	1.02	28	-0.53	0.01	1.03	1.03
2	0.22	0.01	1.12	1.17	29	2.00	0.01	1.16	1.51
3	0.55	0.01	0.97	0.95	30	-0.34	0.01	0.85	0.74
4	-0.20	0.01	0.91	0.85	31	-0.27	0.01	0.97	1.01
5	0.14	0.01	1.01	1.01	32	-0.06	0.01	1.15	1.32
6	-0.27	0.01	1.00	1.06	33	-0.46	0.01	0.86	0.73
7	-1.00	0.01	1.03	1.09	34	0.08	0.01	0.92	0.89
8	0.75	0.01	1.22	1.30	35	-1.46	0.01	0.85	0.64
9	-0.11	0.01	1.11	1.14	36	0.95	0.01	1.13	1.22
10	-0.38	0.01	0.96	0.87	37	1.08	0.01	1.15	1.23
11	0.09	0.01	0.98	0.94	38	-0.15	0.01	0.94	0.86
12	0.43	0.01	0.99	0.97	39	0.64	0.01	1.12	1.16
13	0.47	0.01	1.00	0.97	40	0.39	0.01	1.13	1.15
14	-0.86	0.01	0.89	0.74	41	0.74	0.01	1.01	1.03
15	-0.70	0.01	0.99	1.05	42	-1.02	0.01	0.91	0.86
16	0.33	0.01	0.99	0.99	43	1.31	0.01	1.10	1.20
17	0.25	0.01	0.97	0.93	44	0.35	0.01	1.01	0.97
18	0.65	0.01	1.06	1.08	45	0.58	0.01	1.19	1.27
19	-0.85	0.01	0.85	0.71	46	0.02	0.01	0.97	0.91
20	-0.06	0.01	0.98	0.93	47	0.19	0.01	0.94	0.91
21	-1.54	0.01	0.68	0.48	48	-0.36	0.01	0.87	0.75
22	1.32	0.01	1.12	1.21	49	-0.66	0.01	0.92	0.77
23	0.44	0.01	1.07	1.13	50	0.20	0.01	0.96	0.93
24	-0.34	0.01	0.93	0.85	51	-0.17	0.01	0.90	0.80
25	-1.34	0.01	0.96	0.88	52	-0.30	0.01	1.02	0.96
26	0.67	0.01	1.08	1.11	53	-0.07	0.01	0.96	0.92
27	-0.16	0.01	1.02	1.03	54	-0.15	0.01	0.95	0.89

**Table 7.2.1.14**  
**2007 Spring AIMS IRT Item Statistics**  
**Reading High School**

Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit	Item	Rasch Difficulty	SE	MNSQ Infit	MNSQ Outfit
1	0.02	0.01	0.99	0.96	28	-1.20	0.01	0.83	0.61
2	0.13	0.01	1.08	1.12	29	-0.09	0.01	0.92	0.81
3	-0.88	0.01	1.02	0.99	30	-0.13	0.01	0.90	0.82
4	-0.21	0.01	1.04	1.11	31	1.07	0.01	0.94	0.94
5	0.28	0.01	1.15	1.21	32	1.57	0.01	1.08	1.17
6	-0.68	0.01	1.11	1.24	33	0.69	0.01	0.89	0.84
7	1.37	0.01	1.02	1.07	34	0.07	0.01	0.94	0.88
8	-0.31	0.01	0.96	0.90	35	-0.28	0.01	1.04	1.10
9	0.50	0.01	1.10	1.12	36	0.72	0.01	0.90	0.86
10	0.67	0.01	1.15	1.18	37	-1.67	0.01	0.82	0.50
11	-1.09	0.01	0.93	0.93	38	0.54	0.01	1.12	1.16
12	-0.91	0.01	0.92	0.99	39	0.69	0.01	0.94	0.90
13	-0.47	0.01	1.04	1.04	40	0.68	0.01	0.97	0.94
14	-1.26	0.01	0.84	0.67	41	-1.14	0.01	0.83	0.59
15	-0.74	0.01	0.85	0.68	42	-0.27	0.01	0.99	1.00
16	0.74	0.01	1.23	1.32	43	-0.26	0.01	1.02	1.05
17	-0.15	0.01	1.13	1.29	44	0.59	0.01	1.13	1.24
18	0.46	0.01	1.22	1.38	45	0.44	0.01	1.04	1.03
19	0.95	0.01	1.02	1.04	46	2.29	0.01	1.11	1.44
20	0.36	0.01	0.95	0.93	47	0.52	0.01	1.02	1.00
21	-1.63	0.01	0.87	0.61	48	1.31	0.01	1.23	1.37
22	0.12	0.01	0.87	0.82	49	0.73	0.01	0.92	0.89
23	-1.29	0.01	0.83	0.58	50	0.16	0.01	0.97	0.92
24	-0.18	0.01	0.81	0.74	51	0.88	0.01	1.14	1.18
25	0.37	0.01	1.03	1.12	52	0.32	0.01	0.97	0.95
26	0.15	0.01	0.96	1.05	53	1.39	0.01	0.99	1.06
27	0.24	0.01	0.97	0.90	54	-0.72	0.01	0.99	0.95

### 7.3 Scaling Methods

In 2005, a scale of measurement was determined for each of the AIMS CRT tests. The AIMS CRT tests in grades 3-8 were placed on a vertical scale through the use of external anchor items comprised of *TerraNova* NRT items for which item parameters had been obtained during national standardization. The desired AIMS scales for Grades 3-8 ranged from 200 to 800. The high school tests were placed on a separate scale that ranged from 500 to 900 with an approximate mean of 700. The standard deviations were 40, 50, and 25 for mathematics, reading, and writing, respectively. The AIMS high school assessments were not placed on the grades 3-8 vertical scale. A detailed description concerning the development of the scale of measurement for the AIMS can be found in section 7.2.1 of the 2005 AIMS Technical Report and is available from the Arizona Department of Education: [www.azed.gov/standards/aims/Administering/AIMSTechReport2005.pdf](http://www.azed.gov/standards/aims/Administering/AIMSTechReport2005.pdf).

#### 7.3.1 Long-term Plan for Identifying/Correcting Drift

Because 2007 was only the third year in reporting AIMS performance on the scale of measurement determined in 2005, scale drift was not a concern for the 2007 AIMS administration. In order to identify and correct for drift in later administrations, a set of anchor items from the 2005 administration has been reserved for use in future years. The anchor set will be re-administered in a subsequent administration and the resulting item parameters will be compared to those obtained in the 2005 administration to examine and correct for any scale drift.

### 7.4 Annual Equating

#### 7.4.1 Reading and Mathematics

The 2007 AIMS Reading and Mathematics tests were equated and placed on the operational 2005 AIMS scale using a common-item, non-equivalent groups design. A set of anchor items were selected from the 2006 operational assessments before the item selection workshop. The anchor items were selected with two principles in mind. First, the subset of anchor items should represent the content covered by the full AIMS assessment. Second, the subset of anchor items should be representative of the distribution of item difficulties for the full assessment. All items, including the dual purpose items in DPA reading and mathematics tests, were eligible to be considered anchor items. However, there was a change in the equating process between the 2006 and 2007 administration. For the 2007 equating, the dual purpose items were removed from the anchor set. Since this decision was made after the anchor set had been selected, the blue print representation and the item difficulty representation of the final anchor set may not align as well in some contents and grades.

Table 7.4.1.1 presents the number of anchor items for each grade/subject area. Tables 7.4.1.2 and 7.4.1.3 present representation of content charts for the 2007 anchor items compared against the 2006 operational form. Tables 7.4.1.4 and 7.4.1.5 present descriptive statistics for the 2007 anchor item difficulties and the 2006 operational form.

**Table 7.4.1.1**  
**Spring 2007 AIMS Anchor Items**

Content	Grade	CRT TOTAL (CRT + NRT/CRT)	Anchor (Common CRT: Spring 2006 and 2007, Spring 2005 and 2007)
Mathematics	3	72	37
	4	70	36
	5	68	30
	6	68	30
	7	68	32
	8	66	37
	HS	85	42
Reading	3	54	21
	4	54	24
	5	54	19
	6	54	25
	7	54	20
	8	54	20
	HS	54	22

**Table 7.4.1.2**  
**Representation of Content by 2007 Anchor Sets, Mathematics**

Content and Grade	Items	Strand and Concept																		Total		
		1			2			3			4			5								
MA	1	2	3	1	2	3/4	1	2	1/2	3	4	3/4	1	2	1/2	3	4	3/4	1	2	1/2	Total
3	All (Target)	N	11	10	4	4	4	4	8	8	6	9	4	72								
		Pct	15.28	13.89	5.56	5.56	5.56	5.56	11.11	11.11	8.33	12.50	5.56	72								
	All Anchor	N	4	5	2	1	2	4	6	4	3	4	2	37								
		Pct	10.81	13.51	5.41	2.70	5.41	10.81	16.22	10.81	8.11	10.81	5.41	37								
4	All (Target)	N	9	8	4	4	4	4	8	8	7	10	4	70								
		Pct	12.86	11.43	5.71	5.71	5.71	5.71	11.43	11.43	10.00	14.29	5.71	70								
	All Anchor	N	3	3	2		4	2	6	5	4	4	3	36								
		Pct	8.33	8.33	5.56		11.11	5.56	16.67	13.89	11.11	11.11	8.33	36								
5	All (Target)	N	7	9	4	4	4	4	8	8	7	9	4	68								
		Pct	10.29	13.24	5.88	5.88	5.88	5.88	11.76	11.76	10.29	13.24	5.88	68								
	All Anchor	N	2	4	1	3	2	3	5	4	2	1	3	30								
		Pct	6.67	13.33	3.33	10.00	6.67	10.00	16.67	13.33	6.67	3.33	10.00	30								
6	All (Target)	N	4	7	4	4	4	6	8	8	8	11	4	68								
		Pct	5.88	10.29	5.88	5.88	5.88	8.82	11.76	11.76	11.76	16.18	5.88	68								
	All Anchor	N	1	1	1	2	5		3	4	2	8	2	29								
		Pct	3.45	3.45	3.45	6.90	17.24		10.34	13.79	6.90	27.59	6.90	29								
7	All (Target)	N	5	6	4	6	4	4	8	8	9	10	4	68								
		Pct	7.35	8.82	5.88	8.82	5.88	5.88	11.76	11.76	13.24	14.71	5.88	68								
	All Anchor	N	2	2	1	1	4	1	5	3	4	6	3	32								
		Pct	6.25	6.25	3.13	3.13	12.50	3.13	15.63	9.38	12.50	18.75	9.38	32								
8	All (Target)	N	4	4	4	7	4	4	4	10	9	4	4	66								
		Pct	6.06	6.06	6.06	10.61	6.06	6.06	6.06	15.15	13.64	6.06	6.06	6.06	66							
	All Anchor	N	2	1		5	1	3	3	6	7	3	4	2	37							
		Pct	5.41	2.70		13.51	2.70	8.11	8.11	16.22	18.92	8.11	10.81	5.41	37							
HS	All (Target)	N	4	4	4	8	4	4	4	12	4	8	4	84								
		Pct	4.76	4.76	4.76	9.52	4.76	4.76	4.76	14.29	4.76	9.52	4.76	4.76	84							
	All Anchor	N	1	1	3	4	2	2	1	2	7	2	6	3	41							
		Pct	2.44	2.44	7.32	9.76	4.88	4.88	2.44	17.07	4.88	14.63	7.32	7.32	41							

**Table 7.4.1.3**  
**Representation of Content by 2007 Anchor Sets, Reading**

Content and Grade	Items	Strand and Concept										Total
		1	3	4	6	1	2	1	2	3		
RD												
3	All (Target)	N	4	5	6	9	12	6	6	6	54	
		Pct	7.41	9.26	11.11	16.67	22.22	11.11	11.11	11.11	54	
	All Anchor	N	3	4	1	1	5	3	2	2	21	
		Pct	14.29	19.05	4.76	4.76	23.81	14.29	9.52	9.52	21	
4	All (Target)	N		4	8	17		13	6	6	54	
		Pct		7.41	14.81	31.48		24.07	11.11	11.11	54	
	All Anchor	N		1	2	2		11	3	5	24	
		Pct		4.17	8.33	8.33		45.83	12.50	20.83	24	
5	All (Target)	N		6	6	17		13	6	6	54	
		Pct		11.11	11.11	31.48		24.07	11.11	11.11	54	
	All Anchor	N			2	7		8		2	19	
		Pct			10.53	36.84		42.11		10.53	19	
6	All (Target)	N		6	6	17		13	6	6	54	
		Pct		11.11	11.11	31.48		24.07	11.11	11.11	54	
	All Anchor	N		1	2	10		3	3	6	25	
		Pct		4.00	8.00	40.00		12.00	12.00	24.00	25	
7	All (Target)	N		6	6	13	4	12	7	6	54	
		Pct		11.11	11.11	24.07	7.41	22.22	12.96	11.11	54	
	All Anchor	N			1	4	2	5	4	3	19	
		Pct			5.26	21.05	10.53	26.32	21.05	15.79	19	
8	All (Target)	N		4	5	14	4	13	8	6	54	
		Pct		7.41	9.26	25.93	7.41	24.07	14.81	11.11	54	
	All Anchor	N		1	1	4	3	1	5	5	20	
		Pct		5.00	5.00	20.00	15.00	5.00	25.00	25.00	20	
HS	All (Target)	N		4	4	14	4	12	8	8	54	
		Pct		7.41	7.41	25.93	7.41	22.22	14.81	14.81	54	
	All Anchor	N		1	2	6	2	5	2	4	22	
		Pct		4.55	9.09	27.27	9.09	22.73	9.09	18.18	22	

**Table 7.4.1.4**  
**Representation of Difficulty by 2007 Anchor Sets, Mathematics**

Content	Grade	Statistic	Difficulty Parameter		P-Value	
			Entire 2006 Test	All Anchor Items	Entire 2006 Test	All Anchor Items
MA	3	N	72	37	72	37
		Min	-3.4620	-1.2116	0.38	0.38
		Max	1.9507	1.9507	0.99	0.88
		Mean	0.0793	0.3499	0.69	0.65
		Std Dev	0.9896	0.9746	0.14	0.16
MA	4	N	70	36	70	36
		Min	-1.8736	-1.3142	0.41	0.41
		Max	2.1376	2.1376	0.93	0.91
		Mean	0.1506	0.1746	0.71	0.72
		Std Dev	0.8715	0.7754	0.13	0.12
MA	5	N	68	30	68	30
		Min	-1.7301	-1.7301	0.40	0.40
		Max	2.0354	2.0354	0.92	0.91
		Mean	0.1670	-0.0312	0.69	0.72
		Std Dev	0.8357	0.9381	0.12	0.13
MA	6	N	68	29	68	29
		Min	-2.1025	-1.4566	0.31	0.31
		Max	2.4377	2.4377	0.93	0.90
		Mean	0.0948	0.1832	0.68	0.66
		Std Dev	0.7726	0.8463	0.12	0.13
MA	7	N	68	32	68	32
		Min	-1.3759	-1.2614	0.36	0.47
		Max	1.7411	1.2875	0.89	0.87
		Mean	0.0769	-0.0571	0.69	0.72
		Std Dev	0.7777	0.7330	0.12	0.11
MA	8	N	66	37	66	37
		Min	-1.7704	-1.7704	0.32	0.34
		Max	1.9423	1.8403	0.90	0.90
		Mean	0.0881	0.0187	0.65	0.67
		Std Dev	0.8684	0.7971	0.15	0.13
MA	HS	N	84	41	84	41
		Min	-3.0649	-1.8719	0.32	0.34
		Max	1.9614	1.8407	0.97	0.91
		Mean	0.0708	0.0886	0.66	0.66
		Std Dev	0.9055	0.7762	0.14	0.13

**Table 7.4.1.5**  
**Representation of Difficulty by 2007 Anchor Sets, Reading**

Content	Grade	Statistic	Difficulty Parameter		P-Value	
			Entire 2006 Test	All Anchor Items	Entire 2006 Test	All Anchor Items
RD	3	N	54	21	54	21
		Min	-2.3521	-1.8340	0.31	0.37
		Max	1.9157	1.7748	0.93	0.92
		Mean	-0.0484	0.2817	0.68	0.64
		Std Dev	1.0385	0.9291	0.16	0.16
RD	4	N	54	24	54	24
		Min	-1.6400	-1.2246	0.31	0.31
		Max	2.2952	2.2952	0.89	0.86
		Mean	-0.0215	0.1079	0.70	0.68
		Std Dev	0.7780	0.8764	0.12	0.14
RD	5	N	54	19	54	19
		Min	-2.0399	-2.0399	0.39	0.51
		Max	1.5618	0.9819	0.92	0.92
		Mean	0.0394	0.0298	0.68	0.67
		Std Dev	0.7127	0.8445	0.11	0.12
RD	6	N	54	25	54	25
		Min	-2.0001	-1.5516	0.36	0.44
		Max	1.7480	1.3002	0.92	0.88
		Mean	-0.0203	-0.0096	0.68	0.68
		Std Dev	0.8913	0.7602	0.14	0.12
RD	7	N	54	19	54	19
		Min	-1.8296	-1.3681	0.33	0.49
		Max	1.9844	1.2822	0.91	0.87
		Mean	0.1187	-0.0034	0.65	0.68
		Std Dev	0.7539	0.6710	0.12	0.11
RD	8	N	54	20	54	20
		Min	-1.5395	-1.5395	0.33	0.39
		Max	1.6659	1.3218	0.90	0.90
		Mean	-0.0018	-0.1272	0.65	0.67
		Std Dev	0.7363	0.7106	0.13	0.12
RD	HS	N	54	22	54	22
		Min	-1.5294	-0.8791	0.32	0.43
		Max	2.0538	1.3874	0.90	0.83
		Mean	0.2179	0.2065	0.66	0.66
		Std Dev	0.8010	0.6074	0.14	0.10

A fixed-parameter equating was implemented within WINSTEPS in order to link the 2007 assessment to the operational reporting scale. This is implemented by constraining the 2007 parameter estimates for the common anchor items to equal the final parameter estimates obtained in the 2005 AIMS calibration analyses. Displacement statistics that estimate the difference between the fixed parameter and the estimate had the item parameter not been constrained were evaluated for each anchor item. Displacement statistics greater than 0.5 or less than -0.5 are considered significant in the Rasch literature. The following procedure was used to examine anchor item performance and determine whether to remove anchor items that exhibited significant displacement statistics from the annual equating:

1. All anchor items with displacement statistics greater than 0.3 or less than -0.3 were flagged. Item statistics and item characteristic changes between years were examined. Items were considered for removal from the anchor set if there were compelling psychometric and/or content reasons to do so.
2. All anchor items with displacement statistics greater than 0.5 or less than -.5 were then identified. Calibration was rerun, removing the item with the highest displacement statistic. Content and difficulty representativeness of the remaining anchor set was examined. If items remained with high displacement statistics, calibration was repeated with removal of up to two anchor items for each content and grade level. In instances where more than one anchor item was considered for removal for a given content and grade, content strand and difficulty level of the items was considered to prevent removal of more than one item from the same content strand and difficulty level.

There were a total of six anchor items that were removed from equating, two in High School Mathematics, two in grade 6 Reading, and two in grade 5 Mathematics.

#### **7.4.2 Writing**

In order to expedite score reporting, the Writing prompts administered in 2007 were taken from a prompt bank that had been linked to the AIMS writing scale prior to actual administration. Appendix D contains the AIMS Writing Assessment Pre-equating Study technical report. Further information concerning the pre-equating of the AIMS writing prompts is provided in this report.

#### **7.4.3 Scoring and Standard Error of Measurement**

Item response theory makes available two types of scoring: number-correct and item-pattern. With number-correct scoring, a student's number-correct score (or raw score) is converted to a scale score. Item-pattern scoring calculates a student's scale score, taking into account not only how many items a student answered correctly, but also which items, and the characteristics of each item. For groups of 25 or more students, the two methods produce tau-equivalent results (Yen, 1984.) Tau-equivalent means that examinees are expected to receive the same score on average between the two methods. Number-correct scoring was used to derive scales scores for the AIMS CRT tests, while the AIMS NRT tests were scored using item-pattern scoring with *TerraNova* national standardization item parameters.

Typically, a test score is obtained from a single observation of behavior and represents an estimate of the trait being measured. As an estimate, an observed test score contains some measurement error and does not perfectly reflect an individual's true score. The degree of measurement error in a test score can be estimated using a statistic called the standard error of measurement (SEM).

A student's exact true score cannot be known. The true score is defined as the average test score that would result if the test could be administered repeatedly without the effects of practice or

fatigue. The standard error of measurement is an estimate of the standard deviation of an individual's observed scores from these repeated administrations. For practical purposes, this statistic can be used to obtain a range within which a student's true score is likely to fall. Using item response theory, the standard error of measurement can be calculated for every possible scale score. These SEM values can be computed for both number-correct and item-pattern scoring.

Tables 7.4.3.1 through 7.4.3.22 present raw score to scale score conversion tables and IRT conditional standard errors of measurement for all AIMS CRT tests. Tables 7.4.3.23 through 7.4.3.28 present IRT conditional standard errors of measurement for all AIMS NRT tests.

**Table 7.4.3.1**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 3**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	42	37	404	11
1	200	42	38	407	11
2	230	31	39	410	11
3	249	26	40	413	11
4	264	23	41	415	11
5	275	20	42	418	11
6	284	19	43	421	11
7	292	18	44	424	11
8	300	17	45	427	11
9	306	16	46	430	11
10	312	15	47	433	11
11	317	15	48	436	11
12	322	14	49	439	11
13	327	14	50	442	11
14	331	13	51	445	12
15	335	13	52	448	12
16	339	13	53	452	12
17	343	12	54	455	12
18	347	12	55	459	12
19	351	12	56	463	13
20	354	12	57	467	13
21	357	12	58	471	13
22	361	12	59	475	13
23	364	11	60	479	14
24	367	11	61	484	14
25	370	11	62	489	15
26	373	11	63	495	15
27	376	11	64	501	16
28	379	11	65	507	17
29	382	11	66	515	18
30	385	11	67	523	20
31	388	11	68	534	22
32	390	11	69	547	25
33	393	11	70	565	30
34	396	11	71	594	42
35	399	11	72	650	81
36	401	11			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.2**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 4**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	230	42	36	429	12
1	230	42	37	432	12
2	254	33	38	435	12
3	274	27	39	438	12
4	288	23	40	441	12
5	299	21	41	444	12
6	308	20	42	447	12
7	316	18	43	450	12
8	323	17	44	453	12
9	330	17	45	456	12
10	336	16	46	460	12
11	341	15	47	463	12
12	346	15	48	466	12
13	351	14	49	470	12
14	356	14	50	473	13
15	360	14	51	477	13
16	364	13	52	481	13
17	368	13	53	484	13
18	372	13	54	488	13
19	375	13	55	492	14
20	379	13	56	497	14
21	383	12	57	501	14
22	386	12	58	506	15
23	389	12	59	511	15
24	393	12	60	517	16
25	396	12	61	522	17
26	399	12	62	529	17
27	402	12	63	536	18
28	405	12	64	544	20
29	408	12	65	553	21
30	411	12	66	565	24
31	414	12	67	579	27
32	417	12	68	598	32
33	420	12	69	630	45
34	423	12	70	675	74
35	426	12			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.3**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 5**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	255	51	35	461	11
1	273	41	36	464	11
2	303	29	37	466	11
3	320	24	38	469	11
4	333	21	39	472	11
5	343	19	40	475	11
6	352	18	41	477	11
7	359	17	42	480	11
8	366	16	43	483	11
9	371	15	44	486	11
10	377	15	45	489	11
11	382	14	46	492	11
12	387	14	47	495	11
13	391	13	48	498	11
14	395	13	49	502	12
15	399	13	50	505	12
16	403	12	51	508	12
17	407	12	52	512	12
18	410	12	53	516	12
19	414	12	54	520	13
20	417	12	55	524	13
21	420	11	56	528	13
22	424	11	57	533	14
23	427	11	58	537	14
24	430	11	59	543	15
25	433	11	60	548	16
26	436	11	61	555	17
27	438	11	62	562	18
28	441	11	63	571	19
29	444	11	64	581	21
30	447	11	65	593	24
31	450	11	66	611	29
32	453	11	67	640	41
33	455	11	68	700	85
34	458	11			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.4**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 6**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	42	35	471	12
1	270	42	36	474	12
2	293	33	37	477	12
3	313	28	38	480	12
4	328	24	39	483	12
5	339	22	40	486	12
6	349	20	41	490	12
7	357	19	42	493	12
8	365	18	43	496	12
9	371	17	44	499	12
10	378	16	45	503	12
11	383	16	46	506	13
12	389	15	47	510	13
13	394	15	48	513	13
14	398	14	49	517	13
15	403	14	50	521	13
16	407	14	51	525	14
17	411	14	52	529	14
18	415	13	53	533	14
19	419	13	54	537	14
20	423	13	55	542	15
21	426	13	56	547	15
22	430	13	57	552	16
23	433	12	58	558	16
24	437	12	59	564	17
25	440	12	60	571	18
26	443	12	61	578	19
27	446	12	62	587	20
28	450	12	63	596	22
29	453	12	64	608	24
30	456	12	65	623	28
31	459	12	66	643	33
32	462	12	67	676	46
33	465	12	68	725	78
34	468	12			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.5**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 7**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	290	49	35	497	11
1	300	44	36	500	11
2	331	31	37	502	11
3	349	26	38	505	11
4	363	23	39	508	11
5	373	21	40	511	11
6	382	19	41	515	12
7	390	18	42	518	12
8	397	17	43	521	12
9	403	16	44	524	12
10	409	15	45	527	12
11	414	15	46	531	12
12	419	14	47	534	12
13	423	14	48	537	12
14	428	14	49	541	13
15	432	13	50	545	13
16	436	13	51	548	13
17	440	13	52	552	13
18	443	13	53	556	13
19	447	12	54	561	14
20	450	12	55	565	14
21	454	12	56	570	15
22	457	12	57	575	15
23	460	12	58	580	16
24	464	12	59	586	16
25	467	12	60	593	17
26	470	12	61	600	18
27	473	11	62	608	19
28	476	11	63	617	21
29	479	11	64	628	23
30	482	11	65	641	26
31	485	11	66	660	31
32	488	11	67	691	44
33	491	11	68	740	76
34	494	11			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.6**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT Grade 8**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	300	46	34	514	13
1	300	46	35	517	13
2	329	35	36	521	13
3	349	29	37	524	13
4	365	25	38	528	13
5	377	23	39	531	13
6	387	21	40	535	13
7	395	20	41	538	13
8	403	19	42	542	13
9	410	18	43	546	13
10	417	17	44	549	14
11	422	17	45	553	14
12	428	16	46	557	14
13	433	16	47	561	14
14	438	15	48	565	14
15	443	15	49	570	15
16	447	15	50	574	15
17	452	14	51	579	15
18	456	14	52	584	15
19	460	14	53	589	16
20	464	14	54	594	16
21	468	14	55	600	17
22	472	13	56	606	17
23	476	13	57	612	18
24	479	13	58	620	19
25	483	13	59	628	20
26	486	13	60	636	21
27	490	13	61	647	23
28	493	13	62	659	26
29	497	13	63	674	29
30	500	13	64	695	35
31	504	13	65	730	49
32	507	13	66	800	99
33	510	13			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.7**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Mathematics CRT High School**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	38	43	674	8
1	507	35	44	676	8
2	532	25	45	678	8
3	546	21	46	680	8
4	557	18	47	682	8
5	565	16	48	683	8
6	573	15	49	685	8
7	579	14	50	687	8
8	584	13	51	689	8
9	589	13	52	691	8
10	593	12	53	693	8
11	598	12	54	695	8
12	601	11	55	697	8
13	605	11	56	699	8
14	608	11	57	701	9
15	612	10	58	704	9
16	615	10	59	706	9
17	618	10	60	708	9
18	620	10	61	710	9
19	623	10	62	713	9
20	626	9	63	715	9
21	628	9	64	717	9
22	631	9	65	720	9
23	633	9	66	723	10
24	635	9	67	725	10
25	638	9	68	728	10
26	640	9	69	731	10
27	642	9	70	734	10
28	644	9	71	738	11
29	646	9	72	741	11
30	648	8	73	745	12
31	651	8	74	749	12
32	653	8	75	753	12
33	655	8	76	758	13
34	657	8	77	763	14
35	659	8	78	769	15
36	660	8	79	776	16
37	662	8	80	784	18
38	664	8	81	795	20
39	666	8	82	809	25
40	668	8	83	834	35
41	670	8	84	900	89
42	672	8			

Note. SEM is the standard error of measurement for the scale score. High school mathematics scale scores are not on the same vertical scale as grades 3-8.

**Table 7.4.3.8**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 3**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	200	60	28	417	12
1	231	42	29	420	12
2	262	30	30	424	12
3	280	25	31	427	12
4	294	22	32	431	12
5	305	20	33	435	12
6	314	19	34	439	13
7	322	18	35	443	13
8	329	17	36	446	13
9	336	16	37	451	13
10	342	15	38	455	13
11	347	15	39	459	13
12	352	14	40	463	14
13	357	14	41	468	14
14	362	14	42	473	14
15	367	13	43	478	15
16	371	13	44	483	15
17	375	13	45	489	16
18	379	13	46	496	17
19	383	13	47	503	17
20	387	13	48	511	19
21	391	12	49	520	20
22	395	12	50	530	22
23	398	12	51	544	25
24	402	12	52	562	30
25	406	12	53	592	42
26	409	12	54	640	73
27	413	12			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.9**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 4**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	220	67	28	426	11
1	264	38	29	430	11
2	291	27	30	433	11
3	307	23	31	436	11
4	319	20	32	439	11
5	329	18	33	443	11
6	337	17	34	446	11
7	344	16	35	449	11
8	350	15	36	453	12
9	356	14	37	457	12
10	361	14	38	460	12
11	366	13	39	464	12
12	370	13	40	468	12
13	375	13	41	472	13
14	379	12	42	477	13
15	383	12	43	481	13
16	387	12	44	486	14
17	390	12	45	492	15
18	394	11	46	498	15
19	397	11	47	504	16
20	401	11	48	511	17
21	404	11	49	519	18
22	407	11	50	529	20
23	411	11	51	542	23
24	414	11	52	558	28
25	417	11	53	586	38
26	420	11	54	660	99
27	423	11			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.10**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 5**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	240	67	28	455	11
1	281	41	29	459	11
2	310	29	30	462	12
3	328	24	31	465	12
4	341	21	32	469	12
5	351	19	33	472	12
6	360	18	34	476	12
7	368	17	35	479	12
8	374	16	36	483	12
9	381	15	37	486	12
10	386	15	38	490	12
11	391	14	39	494	13
12	396	14	40	498	13
13	401	13	41	502	13
14	405	13	42	507	14
15	409	13	43	511	14
16	413	13	44	516	14
17	417	12	45	522	15
18	421	12	46	528	16
19	425	12	47	534	17
20	428	12	48	541	18
21	432	12	49	550	19
22	435	12	50	560	21
23	439	12	51	572	24
24	442	12	52	590	29
25	446	12	53	619	41
26	449	12	54	675	80
27	452	11			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.11**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 6**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	250	60	28	462	12
1	281	42	29	466	12
2	311	30	30	469	12
3	329	25	31	473	12
4	342	22	32	476	12
5	353	20	33	480	12
6	362	18	34	484	12
7	370	17	35	487	12
8	377	16	36	491	13
9	383	16	37	495	13
10	389	15	38	499	13
11	394	15	39	503	13
12	399	14	40	508	13
13	404	14	41	512	14
14	409	14	42	517	14
15	413	13	43	522	14
16	417	13	44	527	15
17	422	13	45	533	15
18	426	13	46	539	16
19	429	13	47	546	17
20	433	12	48	554	18
21	437	12	49	562	20
22	441	12	50	573	22
23	444	12	51	586	25
24	448	12	52	603	29
25	452	12	53	633	41
26	455	12	54	690	81
27	459	12			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.12**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 7**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	260	62	28	477	12
1	290	44	29	480	12
2	322	32	30	484	13
3	341	26	31	487	13
4	355	23	32	491	13
5	366	21	33	495	13
6	375	19	34	498	13
7	383	18	35	502	13
8	390	17	36	506	13
9	397	16	37	510	13
10	403	16	38	514	14
11	408	15	39	519	14
12	413	15	40	523	14
13	418	14	41	528	14
14	423	14	42	533	15
15	427	14	43	538	15
16	432	14	44	543	16
17	436	13	45	549	16
18	440	13	46	556	17
19	444	13	47	563	18
20	448	13	48	571	19
21	451	13	49	580	21
22	455	13	50	591	23
23	459	13	51	605	26
24	462	13	52	624	32
25	466	12	53	655	44
26	470	12	54	720	91
27	473	12			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.13**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT Grade 8**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	270	50	28	481	14
1	270	50	29	485	14
2	304	36	30	489	14
3	326	30	31	494	14
4	342	26	32	498	14
5	354	24	33	502	15
6	365	22	34	506	15
7	374	21	35	511	15
8	382	20	36	515	15
9	390	19	37	520	15
10	396	18	38	524	15
11	403	17	39	529	16
12	409	17	40	535	16
13	414	16	41	540	16
14	420	16	42	545	17
15	425	16	43	551	17
16	430	15	44	558	18
17	434	15	45	565	19
18	439	15	46	572	20
19	443	15	47	580	21
20	448	15	48	589	22
21	452	15	49	600	24
22	456	14	50	612	26
23	461	14	51	628	30
24	465	14	52	650	36
25	469	14	53	686	50
26	473	14	54	800	155
27	477	14			

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.14**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Reading CRT High School**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	34	28	664	13
1	500	34	29	668	13
2	507	31	30	672	13
3	526	26	31	675	13
4	540	23	32	679	13
5	551	21	33	683	13
6	560	19	34	687	13
7	568	18	35	691	13
8	575	17	36	695	13
9	582	16	37	699	13
10	588	16	38	703	14
11	594	15	39	707	14
12	599	15	40	712	14
13	604	15	41	717	14
14	609	14	42	722	15
15	613	14	43	727	15
16	618	14	44	733	16
17	622	13	45	739	16
18	626	13	46	745	17
19	630	13	47	752	18
20	634	13	48	760	19
21	638	13	49	770	21
22	642	13	50	781	23
23	646	13	51	795	26
24	650	13	52	814	32
25	653	13	53	845	44
26	657	13	54	900	81
27	661	13			

Note. SEM is the standard error of measurement for the scale score. High school reading scale scores are not on the same vertical scale as grades 3-8.

**Table 7.4.3.15**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 3**

Raw Score	Scale Score	SEM
0	200	216
1	200	216
2	200	216
3	200	216
4	200	216
5	200	216
6	200	216
7	302	19
8	317	16
9	329	15
10	340	14
11	350	14
12	361	14
13	372	14
14	382	14
15	392	14
16	403	15
17	415	16
18	428	16
19	440	15
20	452	15
21	463	15
22	474	15
23	487	16
24	500	16
25	512	15
26	523	14
27	532	13
28	540	13
29	549	12
30	557	12
31	565	13
32	573	13
33	583	14
34	595	17
35	614	23
36	650	54

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.16**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 4**

Raw Score	Scale Score	SEM
0	230	253
1	230	253
2	230	253
3	230	253
4	230	253
5	230	253
6	230	253
7	332	20
8	349	16
9	362	15
10	373	15
11	386	16
12	399	16
13	413	16
14	425	15
15	436	14
16	447	14
17	458	15
18	470	15
19	482	15
20	493	14
21	503	14
22	514	15
23	526	16
24	540	16
25	553	15
26	565	14
27	575	14
28	585	13
29	594	13
30	604	13
31	613	13
32	623	14
33	633	14
34	644	16
35	661	21
36	700	51

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.17**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 5**

Raw Score	Scale Score	SEM
0	255	126
1	255	126
2	255	126
3	255	126
4	255	126
5	255	126
6	255	126
7	350	18
8	365	17
9	378	16
10	392	17
11	406	17
12	420	17
13	433	16
14	446	16
15	457	16
16	470	16
17	482	16
18	495	16
19	508	16
20	519	15
21	531	16
22	544	16
23	557	17
24	571	16
25	583	15
26	594	15
27	604	14
28	614	14
29	624	14
30	634	14
31	644	15
32	655	15
33	667	17
34	684	21
35	727	50
36	740	68

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.18**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 6**

Raw Score	Scale Score	SEM
0	275	117
1	275	117
2	275	117
3	275	117
4	275	117
5	275	117
6	275	117
7	371	18
8	385	17
9	399	17
10	413	18
11	430	19
12	447	18
13	461	16
14	473	16
15	486	16
16	499	17
17	513	17
18	527	17
19	540	16
20	552	16
21	564	16
22	578	18
23	594	18
24	609	17
25	623	16
26	634	15
27	645	15
28	655	15
29	666	15
30	676	15
31	687	15
32	698	16
33	711	18
34	727	22
35	743	30
36	760	43

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.19**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 7**

Raw Score	Scale Score	SEM
0	290	105
1	290	105
2	290	105
3	290	105
4	290	105
5	290	105
6	290	105
7	373	18
8	388	16
9	401	16
10	415	18
11	432	20
12	452	19
13	468	17
14	481	16
15	494	16
16	507	17
17	523	18
18	540	18
19	554	16
20	567	15
21	578	15
22	590	15
23	602	16
24	614	15
25	625	14
26	634	13
27	642	12
28	650	12
29	657	12
30	664	12
31	672	13
32	680	13
33	690	15
34	717	24
35	744	45
36	770	85

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.20**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT Grade 8**

Raw Score	Scale Score	SEM
0	300	50
1	300	50
2	300	50
3	300	50
4	300	50
5	300	50
6	300	50
7	342	22
8	360	17
9	373	16
10	386	16
11	400	17
12	415	18
13	429	17
14	442	16
15	455	16
16	467	17
17	483	19
18	501	20
19	519	18
20	534	17
21	547	16
22	560	17
23	574	18
24	590	18
25	605	17
26	617	15
27	627	14
28	636	13
29	645	13
30	653	13
31	661	13
32	670	14
33	680	15
34	692	17
35	710	23
36	800	182

Note. SEM is the standard error of measurement for the scale score.

**Table 7.4.3.21**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT High School Prompt A**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	31	18.5	666	9
0.5	500	31	19	671	9
1	500	31	19.5	676	9
1.5	500	31	20	681	9
2	500	31	20.5	686	9
2.5	500	31	21	690	9
3	500	31	21.5	696	9
3.5	500	31	22	701	10
4	500	31	22.5	708	10
4.5	500	31	23	714	10
5	500	31	23.5	721	10
5.5	500	31	24	727	10
6	500	31	24.5	733	9
6.5	524	16	25	738	9
7	547	10	25.5	743	9
7.5	553	9	26	748	8
8	558	9	26.5	752	8
8.5	563	9	27	756	8
9	567	9	27.5	760	8
9.5	572	9	28	764	8
10	577	9	28.5	769	8
10.5	583	9	29	773	8
11	588	9	29.5	777	8
11.5	593	9	30	781	8
12	598	9	30.5	786	8
12.5	603	9	31	790	8
13	608	9	31.5	794	8
13.5	613	9	32	798	8
14	617	9	32.5	803	9
14.5	622	9	33	808	9
15	627	9	33.5	814	10
15.5	632	9	34	820	11
16	637	9	34.5	840	18
16.5	643	10	35	860	32
17	648	10	35.5	880	60
17.5	654	10	36	900	111
18	660	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

**Table 7.4.3.22**  
**2007 Spring AIMS Raw Score to Scale Score Table**  
**Writing CRT High School Prompt T**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	31	18.5	666	9
0.5	500	31	19	671	9
1	500	31	19.5	676	9
1.5	500	31	20	680	9
2	500	31	20.5	685	9
2.5	500	31	21	690	9
3	500	31	21.5	695	9
3.5	500	31	22	700	10
4	500	31	22.5	707	10
4.5	500	31	23	713	10
5	500	31	23.5	720	10
5.5	500	31	24	726	10
6	500	31	24.5	732	10
6.5	523	16	25	738	9
7	546	10	25.5	743	9
7.5	552	9	26	747	8
8	557	9	26.5	752	8
8.5	562	9	27	756	8
9	567	9	27.5	760	8
9.5	572	9	28	764	8
10	577	9	28.5	768	8
10.5	582	9	29	772	8
11	587	9	29.5	777	8
11.5	593	9	30	781	8
12	598	9	30.5	785	8
12.5	603	9	31	789	8
13	608	9	31.5	794	8
13.5	613	9	32	798	8
14	617	9	32.5	803	9
14.5	622	9	33	807	9
15	626	9	33.5	814	10
15.5	631	9	34	820	11
16	636	9	34.5	833	15
16.5	642	10	35	845	21
17	648	10	35.5	873	48
17.5	654	10	36	900	111
18	660	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

**Table 7.4.3.23**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 3**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	427	150	455	128	385	148
1	427	150	455	128	385	148
2	427	150	455	128	385	148
3	427	150	455	128	385	148
4	427	150	455	128	385	148
5	427	150	552	31	385	148
6	516	61	568	18	481	52
7	545	33	578	14	506	31
8	561	25	586	12	521	24
9	572	21	592	12	532	20
10	582	18	599	11	542	17
11	590	16	605	11	550	16
12	597	15	612	12	557	15
13	603	14	619	12	564	14
14	610	13	627	13	571	14
15	615	12	634	13	578	14
16	621	12	643	13	585	14
17	627	12	652	14	592	14
18	633	12	663	16	600	15
19	640	13	681	22	607	15
20	647	13	730	63	616	15
21	655	14			625	15
22	665	16			635	16
23	678	19			648	18
24	699	28			667	24
25	750	69			740	87

**Table 7.4.3.24**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 4**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	433	142	465	130	403	161
1	433	142	465	130	403	161
2	433	142	465	130	403	161
3	433	142	465	130	403	161
4	433	142	490	105	403	161
5	465	110	561	34	403	161
6	544	34	579	22	508	56
7	564	25	590	18	536	34
8	576	21	599	16	552	25
9	586	18	608	15	564	21
10	593	15	615	14	574	18
11	600	14	622	14	582	17
12	606	12	629	13	589	16
13	611	12	636	13	596	15
14	616	11	644	14	603	14
15	621	10	652	14	610	14
16	626	10	661	15	616	14
17	630	10	672	17	623	14
18	635	10	686	20	629	13
19	641	11	709	29	636	14
20	647	11	757	66	644	14
21	653	12			653	15
22	662	14			663	17
23	673	17			678	22
24	692	25			704	34
25	780	102			770	90

**Table 7.4.3.25**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 5**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	475	138	480	150	430	155
1	475	138	480	150	430	155
2	475	138	480	150	430	155
3	475	138	480	150	430	155
4	475	138	480	150	430	155
5	510	103	589	41	430	155
6	571	42	608	24	529	56
7	589	26	619	18	561	31
8	600	19	627	15	577	24
9	609	16	634	13	589	20
10	616	14	640	12	598	17
11	622	13	646	11	605	15
12	628	12	651	11	612	14
13	634	12	656	11	619	13
14	639	11	662	11	625	12
15	644	11	668	11	631	12
16	650	11	674	12	637	12
17	655	12	682	13	643	12
18	661	12	692	15	649	12
19	668	13	707	20	655	12
20	675	14	782	87	662	12
21	684	15			670	13
22	695	18			679	15
23	709	21			693	19
24	734	31			718	32
25	790	76			797	105

**Table 7.4.3.26**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 6**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	486	120	495	135	477	143
1	486	120	495	135	477	143
2	486	120	495	135	477	143
3	486	120	495	135	477	143
4	486	120	495	135	477	143
5	486	120	590	40	477	143
6	562	44	608	22	544	76
7	582	27	619	16	583	39
8	595	20	626	13	600	28
9	604	17	633	12	613	22
10	613	15	639	11	622	19
11	620	15	644	11	630	17
12	627	14	650	11	637	15
13	633	14	656	11	644	14
14	639	14	662	12	650	13
15	646	14	669	12	655	12
16	652	13	677	13	661	12
17	658	13	686	15	667	12
18	665	13	697	17	673	12
19	672	14	715	23	679	13
20	679	14	808	106	686	13
21	688	16			694	15
22	699	18			704	17
23	713	22			718	20
24	737	31			740	29
25	800	82			820	98

**Table 7.4.3.27**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 7**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	498	130	502	128	487	146
1	498	130	502	128	487	146
2	498	130	502	128	487	146
3	498	130	502	128	487	146
4	498	130	512	118	487	146
5	498	130	595	35	487	146
6	557	71	611	22	584	49
7	595	34	621	17	608	30
8	612	24	630	14	623	24
9	624	20	637	13	635	21
10	633	17	643	12	644	18
11	640	16	649	12	652	17
12	647	14	655	12	659	15
13	653	13	661	12	666	14
14	659	12	668	13	672	13
15	664	11	675	13	678	13
16	669	11	683	14	684	13
17	674	11	692	16	690	12
18	680	11	705	18	696	12
19	686	11	724	25	702	13
20	692	12	814	103	709	13
21	699	13			717	14
22	708	14			726	16
23	719	17			739	19
24	737	23			758	26
25	810	86			850	107

**Table 7.4.3.28**  
**2007 Spring AIMS NRT SEM Table**  
**Grade 8**

Raw Score	Reading		Language		Mathematics	
	Scale Score	IRT SEM	Scale Score	IRT SEM	Scale Score	IRT SEM
0	507	111	523	115	502	140
1	507	111	523	115	502	140
2	507	111	523	115	502	140
3	507	111	523	115	502	140
4	507	111	523	115	502	140
5	507	111	591	47	502	140
6	541	77	615	25	576	66
7	581	38	628	18	607	37
8	599	27	638	15	624	27
9	612	21	645	13	637	23
10	622	18	653	13	648	21
11	630	16	659	12	658	19
12	638	15	666	13	666	18
13	645	14	673	13	674	17
14	652	14	681	13	682	17
15	659	14	688	13	690	16
16	665	14	696	13	697	15
17	672	14	704	13	704	15
18	679	14	714	14	712	15
19	687	14	729	19	720	15
20	695	15	819	100	728	16
21	704	16			737	16
22	714	17			748	18
23	729	21			763	22
24	753	31			788	32
25	820	89			872	107

## Part 8: Test Results

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### 8.1 Data

Part 8 of this technical report contains information about the results of the 2007 Spring administration of AIMS DPA and AIMS High School. The first section provides information on the CRT scores from the AIMS assessments. The second section provides information on the NRT scores from AIMS DPA. The AERA/APA/NCME standards addressed in Part 8 include: 1.5, 4.3, 4.5, 4.6, 4.7, 6.35, 7.1, 7.10, 13.15, and 13.19. Please note that the corresponding information for the 2006 Fall AIMS administration can be found in Appendix A.

Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

#### 8.1.1 AIMS CRT State Test Results

The AIMS CRT test results for mathematics, reading, and writing are each on a vertical scale for grades 3-8. Development of the vertical scale is described in section 7.2.1 of the 2005 AIMS Technical Report. The AIMS CRT grades 3-8 vertical scale runs from a lowest obtainable scale score (LOSS) of 200 to a highest obtainable scale score (HOSS) of 800. The AIMS high school assessments for mathematics, reading, and writing are each on a separate scale where the LOSS is 500 and the HOSS is 900. The LOSS and HOSS values for each grade/subject can be found in Table 8.1.1.1.

Test results for each grade level and content area CRT test follow in Tables 8.1.1.2 through 8.1.1.7. For each grade, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

In addition to the descriptive statistics presented in Tables 8.1.1.2 through 8.1.1.7, scale score frequency distributions are also presented in Tables 8.1.1.8 through 8.1.1.35. Each grade and content area is presented in a separate table. These tables show the scale score, frequency (Freq), cumulative frequency (Cum Freq), percentage (%), and cumulative percentage (Cum %).

Results for AIMS high school assessments are reported by graduating cohort. Cohort 09 is defined as the group of students that expect to graduate in 2009 and typically includes 10<sup>th</sup> grade students. Cohort 08 is defined as the group of students that expect to graduate in 2008 and typically includes 11<sup>th</sup> grade students. Cohort 07 is defined as the group of students that expect to graduate in 2007 and is typically comprised of seniors.

**Table 8.1.1.1**  
**2007 Spring AIMS LOSS and HOSS Table**

Content	Grade	Loss	Hoss
Reading	3	200	640
	4	220	660
	5	240	675
	6	250	690
	7	260	720
	8	270	800
	HS*	500	900
Writing	3	200	650
	4	230	700
	5	255	740
	6	275	760
	7	290	770
	8	300	800
	HS*	500	900
Mathematics	3	200	650
	4	230	675
	5	255	700
	6	270	725
	7	290	740
	8	300	800
	HS*	500	900

\*HS tests are not on the same scale as G3-8 tests.  
 Scale scores are therefore not comparable between  
 the HS and G3-8 tests.

**Table 8.1.1.2**  
**2007 Spring AIMS State Test Results**  
**Mathematics CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 3</b>							
Total	80072	450.12	49.24	10	18	53	19
Ethnic Background							
White (Not Hispanic)	34233	467.92	48.53	5	11	54	30
Black or African American	4482	434.23	46.04	16	23	51	11
Hispanic or Latino	34938	435.66	43.94	14	24	53	10
American Indian or Alaskan Native	4012	427.32	41.44	17	29	48	6
Asian or Pacific Islander	2223	478.01	52.75	3	10	48	38
Special Program Membership							
Title 1	16290	432.22	44.38	16	25	50	9
English Learner Program	13116	417.19	38.11	22	33	41	3
Special Education	8561	419.56	48.33	28	26	37	8
<b>Grade 4</b>							
Total	79500	485.07	55.71	11	16	46	27
Ethnic Background							
White (Not Hispanic)	34424	505.12	53.13	5	9	46	40
Black or African American	4283	466.25	52.97	18	20	45	17
Hispanic or Latino	34607	468.39	51.23	15	21	47	16
American Indian or Alaskan Native	3875	458.92	49.11	19	25	45	11
Asian or Pacific Islander	2153	518.71	56.35	4	7	38	51
Special Program Membership							
Title 1	15492	464.36	52.38	18	22	45	15
English Learner Program	11148	440.26	42.94	29	31	36	4
Special Education	9038	445.07	56.01	34	24	31	11
<b>Grade 5</b>							
Total	79991	505.36	53.42	12	19	51	18
Ethnic Background							
White (Not Hispanic)	35402	523.60	53.11	6	12	54	28
Black or African American	4383	487.29	48.70	19	24	48	9
Hispanic or Latino	33769	489.39	47.01	17	24	49	10
American Indian or Alaskan Native	4058	480.52	44.35	21	28	44	6
Asian or Pacific Islander	2191	540.82	59.29	4	9	46	40
Special Program Membership							
Title 1	15210	484.62	47.70	20	26	45	9
English Learner Program	9000	459.70	37.17	37	34	28	2
Special Education	9154	463.16	48.02	40	27	28	5

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

**Table 8.1.1.2 (continued)**  
**2007 Spring AIMS State Test Results**  
**Mathematics CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 6</b>							
Total	78793	522.59	61.85	18	17	46	19
Ethnic Background							
White (Not Hispanic)	35330	543.96	61.99	10	12	49	30
Black or African American	4296	502.17	55.92	27	20	43	10
Hispanic or Latino	32860	502.99	53.52	25	21	44	10
American Indian or Alaskan Native	3922	494.00	50.15	30	24	39	7
Asian or Pacific Islander	2253	563.99	67.15	6	9	44	41
Special Program Membership							
Title 1	13235	498.63	54.36	29	22	40	9
English Learner Program	7562	466.83	40.74	53	25	21	1
Special Education	8694	468.41	49.51	55	20	21	4
<b>Grade 7</b>							
Total	78944	545.91	56.15	14	17	51	18
Ethnic Background							
White (Not Hispanic)	35544	565.36	55.01	7	11	55	27
Black or African American	4310	527.16	50.27	21	21	49	9
Hispanic or Latino	32578	528.16	50.20	20	22	49	9
American Indian or Alaskan Native	4288	521.34	47.32	23	25	47	6
Asian or Pacific Islander	2077	583.29	60.12	5	8	48	40
Special Program Membership							
Title 1	11386	523.72	50.76	23	23	46	8
English Learner Program	7425	492.12	38.80	45	30	23	1
Special Education	7908	491.43	46.06	50	24	23	3
<b>Grade 8</b>							
Total	77527	556.83	60.66	21	18	47	14
Ethnic Background							
White (Not Hispanic)	35697	578.37	59.70	11	13	54	21
Black or African American	4273	535.18	54.09	32	23	39	6
Hispanic or Latino	31023	536.61	52.84	30	23	41	6
American Indian or Alaskan Native	4399	528.01	49.49	36	25	36	4
Asian or Pacific Islander	1998	597.76	67.95	8	10	49	33
Special Program Membership							
Title 1	11491	530.26	51.67	35	24	37	5
English Learner Program	7343	501.86	40.35	58	23	18	1
Special Education	7374	497.16	46.69	65	17	16	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

**Table 8.1.1.3**  
**2007 Spring AIMS State Test Results**  
**Mathematics CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 09</b>							
Total	71315	703.61	42.50	21	12	54	13
Ethnic Background							
White (Not Hispanic)	35219	717.61	41.98	12	8	60	20
Black or African American	3884	687.69	36.96	32	15	48	5
Hispanic or Latino	25874	688.25	36.22	31	16	48	5
American Indian or Alaskan Native	4232	682.21	34.19	37	17	42	4
Asian or Pacific Islander	1987	733.65	48.19	8	6	53	34
Special Program Membership							
Title 1	3117	679.37	33.35	40	17	40	3
English Learner Program	3773	662.76	26.47	62	17	20	1
Special Education	5491	660.34	30.22	68	12	19	1
<b>Cohort 08 (Retest)</b>							
Total	14743	668.47	24.44	49	25	25	1
Ethnic Background							
White (Not Hispanic)	4168	674.04	27.53	40	25	33	2
Black or African American	1190	664.45	23.89	54	23	23	0
Hispanic or Latino	7529	666.30	22.06	52	26	22	0
American Indian or Alaskan Native	1594	666.05	22.52	53	26	21	0
Asian or Pacific Islander	202	678.08	34.57	39	24	35	2
Special Program Membership							
Title 1	1298	666.84	23.68	52	24	23	1
English Learner Program	1761	660.08	21.47	64	21	16	0
Special Education	2404	653.48	20.92	75	16	9	0
<b>Cohort 07 (Retest)</b>							
Total	6975	665.68	24.33	55	24	21	1
Ethnic Background							
White (Not Hispanic)	1707	668.42	28.95	52	21	25	2
Black or African American	616	662.91	22.41	60	23	17	0
Hispanic or Latino	3600	664.43	21.87	56	25	19	0
American Indian or Alaskan Native	889	666.29	22.91	51	27	22	0
Asian or Pacific Islander	126	670.97	30.37	50	17	33	1
Special Program Membership							
Title 1	496	664.40	22.65	54	27	18	0
English Learner Program	942	661.37	21.64	62	22	15	0
Special Education	1418	649.79	19.02	83	12	5	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

**Table 8.1.1.4**  
**2007 Spring AIMS State Test Results**  
**Reading CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 3</b>							
Total	79774	455.24	50.92	7	24	57	12
Ethnic Background							
White (Not Hispanic)	34099	475.19	48.95	3	14	63	20
Black or African American	4460	444.41	47.13	8	29	55	7
Hispanic or Latino	34811	438.40	46.42	10	33	52	5
American Indian or Alaskan Native	4001	432.75	43.52	10	38	48	4
Asian or Pacific Islander	2221	476.48	48.45	3	14	64	20
Special Program Membership							
Title 1	16263	435.15	46.76	12	35	49	5
English Learner Program	13044	413.54	38.92	19	47	33	1
Special Education	8284	418.50	50.79	24	38	33	4
<b>Grade 4</b>							
Total	79270	470.71	52.12	11	24	55	10
Ethnic Background							
White (Not Hispanic)	34339	491.25	49.40	5	15	64	16
Black or African American	4276	457.24	49.60	16	30	50	5
Hispanic or Latino	34498	453.09	47.79	17	32	47	4
American Indian or Alaskan Native	3848	447.95	43.51	17	37	44	2
Asian or Pacific Islander	2149	493.99	50.12	4	14	64	17
Special Program Membership							
Title 1	15452	449.31	47.71	19	34	44	4
English Learner Program	11073	422.11	36.36	33	45	21	0
Special Education	8814	431.41	52.00	37	31	28	4
<b>Grade 5</b>							
Total	79821	489.76	45.39	8	23	63	7
Ethnic Background							
White (Not Hispanic)	35347	507.13	42.91	3	13	72	11
Black or African American	4386	478.84	42.52	11	28	58	3
Hispanic or Latino	33680	474.13	41.63	12	31	55	2
American Indian or Alaskan Native	4032	469.49	38.68	12	36	51	2
Asian or Pacific Islander	2188	510.53	45.63	4	12	69	15
Special Program Membership							
Title 1	15183	470.62	42.47	15	33	50	2
English Learner Program	8958	441.83	31.95	30	48	21	0
Special Education	8979	450.78	44.15	31	37	30	2

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

(table continues)

**Table 8.1.1.4 (continued)**  
**2007 Spring AIMS State Test Results**  
**Reading CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 6</b>							
Total	78842	498.99	48.38	9	24	59	7
Ethnic Background							
White (Not Hispanic)	35359	518.18	45.53	4	14	70	12
Black or African American	4318	486.59	44.24	12	31	54	3
Hispanic or Latino	32851	481.07	43.97	14	33	50	3
American Indian or Alaskan Native	3929	477.23	40.43	13	39	47	1
Asian or Pacific Islander	2253	522.00	48.27	3	13	68	16
Special Program Membership							
Title 1	13242	477.91	44.33	16	35	47	2
English Learner Program	7553	443.99	32.97	39	47	15	0
Special Education	8730	454.62	43.13	34	39	25	1
<b>Grade 7</b>							
Total	79246	514.17	53.23	9	24	58	9
Ethnic Background							
White (Not Hispanic)	35688	534.30	51.42	4	15	67	14
Black or African American	4350	501.11	48.39	12	29	54	4
Hispanic or Latino	32646	495.35	47.60	14	32	50	3
American Indian or Alaskan Native	4332	491.23	44.68	14	36	47	2
Asian or Pacific Islander	2082	540.92	55.41	4	14	64	19
Special Program Membership							
Title 1	11417	492.15	48.36	16	34	47	3
English Learner Program	7450	455.79	32.20	37	48	15	0
Special Education	8159	464.03	42.94	36	40	23	1
<b>Grade 8</b>							
Total	77849	520.67	56.86	11	26	56	7
Ethnic Background							
White (Not Hispanic)	35843	542.48	55.06	5	17	67	11
Black or African American	4301	507.31	51.40	14	31	52	3
Hispanic or Latino	31131	499.73	50.14	17	35	46	2
American Indian or Alaskan Native	4439	492.12	45.68	19	41	39	1
Asian or Pacific Islander	1998	549.57	58.56	4	15	66	15
Special Program Membership							
Title 1	11541	496.32	49.41	18	37	43	2
English Learner Program	7388	458.42	33.50	44	45	11	0
Special Education	7657	465.74	43.73	42	38	19	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

**Table 8.1.1.5**  
**2007 Spring AIMS State Test Results**  
**Reading CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 09</b>							
Total	74071	703.15	50.25	8	20	65	7
Ethnic Background							
White (Not Hispanic)	36575	721.89	46.90	3	11	74	11
Black or African American	4035	689.14	46.35	11	25	61	3
Hispanic or Latino	26844	682.75	45.40	12	30	55	2
American Indian or Alaskan Native	4514	675.86	41.88	12	37	50	1
Asian or Pacific Islander	2003	725.52	51.16	4	11	70	15
Special Program Membership							
Title 1	3184	673.65	43.75	16	34	48	2
English Learner Program	3534	640.36	31.32	38	48	14	0
Special Education	6173	651.85	40.56	32	40	27	1
<b>Cohort 08 (Retest)</b>							
Total	12096	657.88	36.15	21	48	31	1
Ethnic Background							
White (Not Hispanic)	2855	668.89	43.71	17	41	40	2
Black or African American	898	653.96	35.41	25	47	28	0
Hispanic or Latino	6696	653.78	32.10	23	50	27	0
American Indian or Alaskan Native	1369	656.11	32.16	20	52	28	0
Asian or Pacific Islander	237	665.87	37.67	15	48	36	1
Special Program Membership							
Title 1	999	653.81	34.33	25	48	27	0
English Learner Program	1946	641.97	28.44	34	53	13	0
Special Education	2614	640.40	30.16	37	48	15	0
<b>Cohort 07 (Retest)</b>							
Total	5505	653.95	35.80	24	49	26	1
Ethnic Background							
White (Not Hispanic)	1016	660.22	45.44	25	41	32	2
Black or African American	404	652.75	33.80	25	46	28	0
Hispanic or Latino	3137	650.40	31.84	26	51	23	0
American Indian or Alaskan Native	806	658.44	34.19	18	53	28	1
Asian or Pacific Islander	124	662.71	38.94	18	48	34	1
Special Program Membership							
Title 1	433	653.23	34.17	27	45	27	0
English Learner Program	1146	645.67	29.21	29	53	18	0
Special Education	1419	636.76	29.98	42	46	12	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

**Table 8.1.1.6**  
**2007 Spring AIMS State Test Results**  
**Writing CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 3</b>							
Total	80027	462.51	78.05	6	14	65	16
Ethnic Background							
White (Not Hispanic)	34237	480.97	69.20	3	9	65	22
Black or African American	4480	450.59	83.25	8	16	64	12
Hispanic or Latino	34888	446.60	80.61	8	18	65	9
American Indian or Alaskan Native	4024	440.24	81.15	8	19	66	7
Asian or Pacific Islander	2218	494.39	75.25	4	6	58	33
Special Program Membership							
Title 1	16287	441.50	82.47	8	19	64	8
English Learner Program	13069	416.53	86.47	13	27	57	3
Special Education	8571	407.90	94.02	16	31	47	6
<b>Grade 4</b>							
Total	79541	494.23	77.85	6	15	67	12
Ethnic Background							
White (Not Hispanic)	34422	513.85	68.79	3	10	69	18
Black or African American	4295	480.51	82.83	8	20	64	8
Hispanic or Latino	34626	476.75	80.77	8	20	65	6
American Indian or Alaskan Native	3884	474.03	76.39	7	21	67	4
Asian or Pacific Islander	2156	526.95	72.36	3	6	65	26
Special Program Membership							
Title 1	15492	470.27	83.08	9	22	63	5
English Learner Program	11146	437.59	87.10	15	34	50	1
Special Education	9101	434.37	94.15	18	35	43	4
<b>Grade 5</b>							
Total	80024	524.19	69.62	4	28	63	4
Ethnic Background							
White (Not Hispanic)	35414	537.99	63.49	2	23	69	6
Black or African American	4390	515.05	73.40	6	32	59	3
Hispanic or Latino	33775	511.20	72.35	6	33	59	2
American Indian or Alaskan Native	4068	507.54	66.65	5	38	56	1
Asian or Pacific Islander	2191	552.78	66.22	2	15	71	11
Special Program Membership							
Title 1	15224	506.40	74.61	7	35	56	2
English Learner Program	9015	468.50	80.94	14	51	35	0
Special Education	9221	463.75	82.86	16	53	31	1

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(table continues)

**Table 8.1.1.6 (continued)**  
**2007 Spring AIMS State Test Results**  
**Writing CRT Grades 3-8**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Grade 6</b>							
Total	78909	537.51	70.41	5	17	74	5
Ethnic Background							
White (Not Hispanic)	35379	553.06	60.85	2	12	78	7
Black or African American	4325	528.25	75.28	6	19	71	4
Hispanic or Latino	32895	522.40	75.21	7	21	69	3
American Indian or Alaskan Native	3932	520.13	70.25	6	23	69	2
Asian or Pacific Islander	2250	563.20	67.36	3	8	78	11
Special Program Membership							
Title 1	13253	519.49	76.82	7	23	67	3
English Learner Program	7585	468.82	91.05	19	38	43	0
Special Education	8880	474.88	84.43	17	41	42	1
<b>Grade 7</b>							
Total	79374	564.13	71.95	4	14	76	6
Ethnic Background							
White (Not Hispanic)	35733	581.09	63.08	2	10	80	8
Black or African American	4354	555.46	75.58	5	16	74	4
Hispanic or Latino	32728	548.47	75.18	6	19	73	3
American Indian or Alaskan Native	4335	538.29	76.29	6	23	69	2
Asian or Pacific Islander	2073	594.35	64.75	2	7	77	14
Special Program Membership							
Title 1	11430	544.55	79.15	7	20	71	3
English Learner Program	7477	492.90	84.82	16	37	47	0
Special Education	8272	491.57	86.60	17	39	44	1
<b>Grade 8</b>							
Total	77969	549.73	69.28	3	24	71	2
Ethnic Background							
White (Not Hispanic)	35852	569.74	60.51	1	15	80	3
Black or African American	4310	539.74	69.40	4	28	67	1
Hispanic or Latino	31214	529.72	71.52	5	31	63	1
American Indian or Alaskan Native	4452	524.78	69.45	5	35	60	0
Asian or Pacific Islander	2002	582.69	62.58	1	12	81	6
Special Program Membership							
Title 1	11550	526.92	72.45	6	32	61	1
English Learner Program	7410	473.90	75.14	15	54	31	0
Special Education	7717	480.00	74.49	13	54	33	0

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**Table 8.1.1.7**  
**2007 Spring AIMS State Test Results**  
**Writing CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 09</b>							
Total	73812	699.51	47.57	4	23	64	9
Ethnic Background							
White (Not Hispanic)	36540	713.21	41.59	2	15	70	13
Black or African American	4022	692.22	50.32	7	24	63	6
Hispanic or Latino	26708	684.22	48.11	7	32	58	3
American Indian or Alaskan Native	4453	675.70	47.07	8	41	49	2
Asian or Pacific Islander	1990	722.17	48.99	3	12	61	24
Special Program Membership							
Title 1	3149	679.58	48.71	8	35	54	3
English Learner Program	3507	633.18	55.22	28	51	20	0
Special Education	6089	645.37	51.92	21	53	25	0
<b>Cohort 08 (Retest)</b>							
Total	11087	657.81	49.33	14	51	33	1
Ethnic Background							
White (Not Hispanic)	3355	670.63	48.73	10	45	43	3
Black or African American	766	654.64	54.51	17	50	32	1
Hispanic or Latino	5615	651.69	47.75	16	54	29	0
American Indian or Alaskan Native	1130	650.84	47.02	15	57	27	0
Asian or Pacific Islander	188	665.00	53.02	14	48	36	3
Special Program Membership							
Title 1	785	650.80	48.87	18	53	29	0
English Learner Program	1705	627.19	51.72	30	56	14	0
Special Education	2583	635.23	48.17	25	60	15	0
<b>Cohort 07 (Retest)</b>							
Total	4647	647.27	49.06	20	55	24	1
Ethnic Background							
White (Not Hispanic)	1098	657.71	49.75	15	51	32	2
Black or African American	317	643.26	55.01	22	53	25	1
Hispanic or Latino	2547	643.20	45.70	21	58	21	0
American Indian or Alaskan Native	581	647.87	53.53	19	55	24	2
Asian or Pacific Islander	90	645.47	60.84	24	46	28	2
Special Program Membership							
Title 1	321	642.43	49.13	22	53	24	0
English Learner Program	955	634.12	46.48	26	59	15	0
Special Education	1385	629.52	46.17	30	58	11	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes. High school results are not on the same scale as grade 3-8 results.

**Table 8.1.1.8**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 3**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
275	1	0.00	1	0.00	413	1357	1.69	19383	24.21
284	1	0.00	2	0.00	415	1494	1.87	20877	26.07
300	2	0.00	4	0.00	418	1505	1.88	22382	27.95
306	5	0.01	9	0.01	421	1560	1.95	23942	29.90
312	6	0.01	15	0.02	424	1615	2.02	25557	31.92
317	4	0.00	19	0.02	427	1712	2.14	27269	34.06
322	11	0.01	30	0.04	430	1749	2.18	29018	36.24
327	19	0.02	49	0.06	433	1771	2.21	30789	38.45
331	39	0.05	88	0.11	436	1814	2.27	32603	40.72
335	73	0.09	161	0.20	439	1992	2.49	34595	43.20
339	90	0.11	251	0.31	442	1943	2.43	36538	45.63
343	143	0.18	394	0.49	445	2102	2.63	38640	48.26
347	200	0.25	594	0.74	448	2053	2.56	40693	50.82
351	273	0.34	867	1.08	452	2104	2.63	42797	53.45
354	325	0.41	1192	1.49	455	2357	2.94	45154	56.39
357	407	0.51	1599	2.00	459	2276	2.84	47430	59.23
361	433	0.54	2032	2.54	463	2453	3.06	49883	62.30
364	556	0.69	2588	3.23	467	2426	3.03	52309	65.33
367	612	0.76	3200	4.00	471	2412	3.01	54721	68.34
370	703	0.88	3903	4.87	475	2461	3.07	57182	71.41
373	736	0.92	4639	5.79	479	2564	3.20	59746	74.62
376	731	0.91	5370	6.71	484	2505	3.13	62251	77.74
379	810	1.01	6180	7.72	489	2465	3.08	64716	80.82
382	856	1.07	7036	8.79	495	2428	3.03	67144	83.85
385	916	1.14	7952	9.93	501	2337	2.92	69481	86.77
388	934	1.17	8886	11.10	507	2221	2.77	71702	89.55
390	971	1.21	9857	12.31	515	2007	2.51	73709	92.05
393	995	1.24	10852	13.55	523	1789	2.23	75498	94.29
396	1095	1.37	11947	14.92	534	1609	2.01	77107	96.30
399	1143	1.43	13090	16.35	547	1268	1.58	78375	97.88
401	1204	1.50	14294	17.85	565	936	1.17	79311	99.05
404	1211	1.51	15505	19.36	594	558	0.70	79869	99.75
407	1282	1.60	16787	20.96	650	203	0.25	80072	100.00
410	1239	1.55	18026	22.51					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.9**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 4**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
308	1	0.00	1	0.00	438	1084	1.36	17433	21.93
316	1	0.00	2	0.00	441	1178	1.48	18611	23.41
323	2	0.00	4	0.01	444	1238	1.56	19849	24.97
330	4	0.01	8	0.01	447	1275	1.60	21124	26.57
336	4	0.01	12	0.02	450	1325	1.67	22449	28.24
341	14	0.02	26	0.03	453	1372	1.73	23821	29.96
346	36	0.05	62	0.08	456	1463	1.84	25284	31.80
351	55	0.07	117	0.15	460	1528	1.92	26812	33.73
356	80	0.10	197	0.25	463	1611	2.03	28423	35.75
360	150	0.19	347	0.44	466	1650	2.08	30073	37.83
364	168	0.21	515	0.65	470	1793	2.26	31866	40.08
368	247	0.31	762	0.96	473	1745	2.19	33611	42.28
372	304	0.38	1066	1.34	477	1883	2.37	35494	44.65
375	377	0.47	1443	1.82	481	1948	2.45	37442	47.10
379	479	0.60	1922	2.42	484	2189	2.75	39631	49.85
383	522	0.66	2444	3.07	488	2274	2.86	41905	52.71
386	556	0.70	3000	3.77	492	2364	2.97	44269	55.68
389	632	0.79	3632	4.57	497	2471	3.11	46740	58.79
393	674	0.85	4306	5.42	501	2702	3.40	49442	62.19
396	646	0.81	4952	6.23	506	2688	3.38	52130	65.57
399	692	0.87	5644	7.10	511	2806	3.53	54936	69.10
402	719	0.90	6363	8.00	517	2913	3.66	57849	72.77
405	790	0.99	7153	9.00	522	3080	3.87	60929	76.64
408	773	0.97	7926	9.97	529	3021	3.80	63950	80.44
411	827	1.04	8753	11.01	536	2977	3.74	66927	84.18
414	839	1.06	9592	12.07	544	2893	3.64	69820	87.82
417	833	1.05	10425	13.11	553	2723	3.43	72543	91.25
420	888	1.12	11313	14.23	565	2487	3.13	75030	94.38
423	929	1.17	12242	15.40	579	2010	2.53	77040	96.91
426	957	1.20	13199	16.60	598	1409	1.77	78449	98.68
429	967	1.22	14166	17.82	630	766	0.96	79215	99.64
432	1119	1.41	15285	19.23	675	285	0.36	79500	100.00
435	1064	1.34	16349	20.56					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.10**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 5**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
273	1	0.00	1	0.00	469	1394	1.74	21613	27.02
359	2	0.00	3	0.00	472	1431	1.79	23044	28.81
366	5	0.01	8	0.01	475	1506	1.88	24550	30.69
371	12	0.02	20	0.03	477	1565	1.96	26115	32.65
377	20	0.03	40	0.05	480	1629	2.04	27744	34.68
382	44	0.06	84	0.11	483	1661	2.08	29405	36.76
387	64	0.08	148	0.19	486	1680	2.10	31085	38.86
391	89	0.11	237	0.30	489	1742	2.18	32827	41.04
395	159	0.20	396	0.50	492	1843	2.30	34670	43.34
399	249	0.31	645	0.81	495	1843	2.30	36513	45.65
403	288	0.36	933	1.17	498	1921	2.40	38434	48.05
407	378	0.47	1311	1.64	502	1939	2.42	40373	50.47
410	492	0.62	1803	2.25	505	2002	2.50	42375	52.97
414	539	0.67	2342	2.93	508	2081	2.60	44456	55.58
417	601	0.75	2943	3.68	512	2152	2.69	46608	58.27
420	685	0.86	3628	4.54	516	2106	2.63	48714	60.90
424	766	0.96	4394	5.49	520	2228	2.79	50942	63.68
427	780	0.98	5174	6.47	524	2369	2.96	53311	66.65
430	835	1.04	6009	7.51	528	2382	2.98	55693	69.62
433	912	1.14	6921	8.65	533	2363	2.95	58056	72.58
436	864	1.08	7785	9.73	537	2406	3.01	60462	75.59
438	941	1.18	8726	10.91	543	2374	2.97	62836	78.55
441	964	1.21	9690	12.11	548	2469	3.09	65305	81.64
444	970	1.21	10660	13.33	555	2412	3.02	67717	84.66
447	1078	1.35	11738	14.67	562	2390	2.99	70107	87.64
450	1002	1.25	12740	15.93	571	2249	2.81	72356	90.46
453	1153	1.44	13893	17.37	581	2322	2.90	74678	93.36
455	1179	1.47	15072	18.84	593	1963	2.45	76641	95.81
458	1255	1.57	16327	20.41	611	1631	2.04	78272	97.85
461	1223	1.53	17550	21.94	640	1158	1.45	79430	99.3
464	1338	1.67	18888	23.61	700	561	0.7	79991	100.00
466	1331	1.66	20219	25.28					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.11**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 6**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
339	1	0.00	1	0.00	477	1239	1.57	20442	25.94
349	1	0.00	2	0.00	480	1332	1.69	21774	27.63
357	2	0.00	4	0.01	483	1368	1.74	23142	29.37
365	3	0.00	7	0.01	486	1354	1.72	24496	31.09
371	2	0.00	9	0.01	490	1506	1.91	26002	33.00
378	13	0.02	22	0.03	493	1560	1.98	27562	34.98
383	36	0.05	58	0.07	496	1506	1.91	29068	36.89
389	60	0.08	118	0.15	499	1540	1.95	30608	38.85
394	80	0.10	198	0.25	503	1627	2.06	32235	40.91
398	133	0.17	331	0.42	506	1717	2.18	33952	43.09
403	203	0.26	534	0.68	510	1782	2.26	35734	45.35
407	294	0.37	828	1.05	513	1773	2.25	37507	47.60
411	376	0.48	1204	1.53	517	1859	2.36	39366	49.96
415	466	0.59	1670	2.12	521	1875	2.38	41241	52.34
419	551	0.70	2221	2.82	525	1927	2.45	43168	54.79
423	578	0.73	2799	3.55	529	2082	2.64	45250	57.43
426	680	0.86	3479	4.42	533	2004	2.54	47254	59.97
430	799	1.01	4278	5.43	537	2154	2.73	49408	62.71
433	788	1.00	5066	6.43	542	2318	2.94	51726	65.65
437	876	1.11	5942	7.54	547	2357	2.99	54083	68.64
440	1026	1.30	6968	8.84	552	2245	2.85	56328	71.49
443	953	1.21	7921	10.05	558	2385	3.03	58713	74.52
446	965	1.22	8886	11.28	564	2458	3.12	61171	77.64
450	1011	1.28	9897	12.56	571	2401	3.05	63572	80.68
453	1068	1.36	10965	13.92	578	2437	3.09	66009	83.78
456	1073	1.36	12038	15.28	587	2417	3.07	68426	86.84
459	1141	1.45	13179	16.73	596	2399	3.04	70825	89.89
462	1185	1.50	14364	18.23	608	2166	2.75	72991	92.64
465	1150	1.46	15514	19.69	623	2054	2.61	75045	95.24
468	1221	1.55	16735	21.24	643	1784	2.26	76829	97.51
471	1192	1.51	17927	22.75	676	1253	1.59	78082	99.1
474	1276	1.62	19203	24.37	725	711	0.9	78793	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.12**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 7**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
349	1	0.00	1	0.00	502	1308	1.66	18810	23.83
382	1	0.00	2	0.00	505	1272	1.61	20082	25.44
390	3	0.00	5	0.01	508	1350	1.71	21432	27.15
397	9	0.01	14	0.02	511	1460	1.85	22892	29.00
403	16	0.02	30	0.04	515	1469	1.86	24361	30.86
409	22	0.03	52	0.07	518	1557	1.97	25918	32.83
414	37	0.05	89	0.11	521	1603	2.03	27521	34.86
419	79	0.10	168	0.21	524	1604	2.03	29125	36.89
423	111	0.14	279	0.35	527	1741	2.21	30866	39.10
428	203	0.26	482	0.61	531	1797	2.28	32663	41.37
432	242	0.31	724	0.92	534	1895	2.40	34558	43.78
436	350	0.44	1074	1.36	537	1903	2.41	36461	46.19
440	401	0.51	1475	1.87	541	1984	2.51	38445	48.70
443	468	0.59	1943	2.46	545	2109	2.67	40554	51.37
447	562	0.71	2505	3.17	548	2076	2.63	42630	54.00
450	599	0.76	3104	3.93	552	2252	2.85	44882	56.85
454	671	0.85	3775	4.78	556	2296	2.91	47178	59.76
457	656	0.83	4431	5.61	561	2341	2.97	49519	62.73
460	716	0.91	5147	6.52	565	2470	3.13	51989	65.86
464	728	0.92	5875	7.44	570	2486	3.15	54475	69.00
467	795	1.01	6670	8.45	575	2524	3.20	56999	72.20
470	861	1.09	7531	9.54	580	2622	3.32	59621	75.52
473	819	1.04	8350	10.58	586	2624	3.32	62245	78.85
476	849	1.08	9199	11.65	593	2603	3.30	64848	82.14
479	879	1.11	10078	12.77	600	2609	3.30	67457	85.45
482	920	1.17	10998	13.93	608	2357	2.99	69814	88.43
485	954	1.21	11952	15.14	617	2271	2.88	72085	91.31
488	1019	1.29	12971	16.43	628	2174	2.75	74259	94.07
491	1081	1.37	14052	17.80	641	1818	2.3	76077	96.37
494	1129	1.43	15181	19.23	660	1430	1.81	77507	98.18
497	1103	1.40	16284	20.63	691	1003	1.27	78510	99.45
500	1218	1.54	17502	22.17	740	434	0.55	78944	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.13**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT Grade 8**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
365	1	0.00	1	0.00	521	1612	2.08	23870	30.79
387	1	0.00	2	0.00	524	1629	2.10	25499	32.89
395	7	0.01	9	0.01	528	1648	2.13	27147	35.02
403	6	0.01	15	0.02	531	1668	2.15	28815	37.17
410	20	0.03	35	0.05	535	1645	2.12	30460	39.29
417	43	0.06	78	0.10	538	1809	2.33	32269	41.62
422	85	0.11	163	0.21	542	1772	2.29	34041	43.91
428	120	0.15	283	0.37	546	1862	2.40	35903	46.31
433	191	0.25	474	0.61	549	1926	2.48	37829	48.79
438	240	0.31	714	0.92	553	1917	2.47	39746	51.27
443	364	0.47	1078	1.39	557	1878	2.42	41624	53.69
447	428	0.55	1506	1.94	561	1911	2.46	43535	56.15
452	579	0.75	2085	2.69	565	2020	2.61	45555	58.76
456	621	0.80	2706	3.49	570	2027	2.61	47582	61.37
460	707	0.91	3413	4.40	574	2000	2.58	49582	63.95
464	796	1.03	4209	5.43	579	2049	2.64	51631	66.60
468	892	1.15	5101	6.58	584	2094	2.70	53725	69.30
472	871	1.12	5972	7.70	589	2171	2.80	55896	72.10
476	954	1.23	6926	8.93	594	2254	2.91	58150	75.01
479	957	1.23	7883	10.17	600	2283	2.94	60433	77.95
483	1067	1.38	8950	11.54	606	2176	2.81	62609	80.76
486	1116	1.44	10066	12.98	612	2234	2.88	64843	83.64
490	1133	1.46	11199	14.45	620	2056	2.65	66899	86.29
493	1193	1.54	12392	15.98	628	2143	2.76	69042	89.06
497	1261	1.63	13653	17.61	636	1995	2.57	71037	91.63
500	1349	1.74	15002	19.35	647	1790	2.31	72827	93.94
504	1387	1.79	16389	21.14	659	1612	2.08	74439	96.02
507	1365	1.76	17754	22.90	674	1257	1.62	75696	97.64
510	1469	1.89	19223	24.80	695	943	1.22	76639	98.85
514	1508	1.95	20731	26.74	730	620	0.8	77259	99.65
517	1527	1.97	22258	28.71	800	268	0.35	77527	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.14**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT High School Cohort 09**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
532	1	0.00	1	0.00	682	1134	1.59	23574	33.06
589	1	0.00	2	0.00	683	1153	1.62	24727	34.67
593	1	0.00	3	0.00	685	1175	1.65	25902	36.32
598	2	0.00	5	0.01	687	1194	1.67	27096	37.99
601	4	0.01	9	0.01	689	1167	1.64	28263	39.63
605	18	0.03	27	0.04	691	1230	1.72	29493	41.36
608	22	0.03	49	0.07	693	1349	1.89	30842	43.25
612	42	0.06	91	0.13	695	1330	1.86	32172	45.11
615	81	0.11	172	0.24	697	1366	1.92	33538	47.03
618	105	0.15	277	0.39	699	1328	1.86	34866	48.89
620	160	0.22	437	0.61	701	1362	1.91	36228	50.80
623	209	0.29	646	0.91	704	1475	2.07	37703	52.87
626	260	0.36	906	1.27	706	1461	2.05	39164	54.92
628	361	0.51	1267	1.78	708	1437	2.02	40601	56.93
631	408	0.57	1675	2.35	710	1530	2.15	42131	59.08
633	478	0.67	2153	3.02	713	1503	2.11	43634	61.18
635	552	0.77	2705	3.79	715	1578	2.21	45212	63.40
638	608	0.85	3313	4.65	717	1508	2.11	46720	65.51
640	669	0.94	3982	5.58	720	1533	2.15	48253	67.66
642	762	1.07	4744	6.65	723	1586	2.22	49839	69.89
644	763	1.07	5507	7.72	725	1576	2.21	51415	72.10
646	779	1.09	6286	8.81	728	1497	2.10	52912	74.19
648	745	1.04	7031	9.86	731	1542	2.16	54454	76.36
651	836	1.17	7867	11.03	734	1583	2.22	56037	78.58
653	824	1.16	8691	12.19	738	1534	2.15	57571	80.73
655	847	1.19	9538	13.37	741	1478	2.07	59049	82.80
657	870	1.22	10408	14.59	745	1446	2.03	60495	84.83
659	942	1.32	11350	15.92	749	1413	1.98	61908	86.81
660	922	1.29	12272	17.21	753	1333	1.87	63241	88.68
662	900	1.26	13172	18.47	758	1365	1.91	64606	90.59
664	967	1.36	14139	19.83	763	1309	1.84	65915	92.43
666	962	1.35	15101	21.18	769	1266	1.78	67181	94.20
668	1008	1.41	16109	22.59	776	1167	1.64	68348	95.84
670	951	1.33	17060	23.92	784	955	1.34	69303	97.18
672	990	1.39	18050	25.31	795	827	1.16	70130	98.34
674	1043	1.46	19093	26.77	809	601	0.84	70731	99.18
676	1078	1.51	20171	28.28	834	409	0.57	71140	99.75
678	1135	1.59	21306	29.88	900	175	0.25	71315	100.00
680	1134	1.59	22440	31.47					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.15**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT High School Cohort 08**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
584	2	0.01	2	0.01	683	385	2.61	11299	76.64
593	2	0.01	4	0.03	685	384	2.60	11683	79.24
598	1	0.01	5	0.03	687	381	2.58	12064	81.83
605	5	0.03	10	0.07	689	354	2.40	12418	84.23
608	16	0.11	26	0.18	691	306	2.08	12724	86.31
612	16	0.11	42	0.28	693	244	1.66	12968	87.96
615	27	0.18	69	0.47	695	249	1.69	13217	89.65
618	46	0.31	115	0.78	697	221	1.50	13438	91.15
620	71	0.48	186	1.26	699	184	1.25	13622	92.40
623	92	0.62	278	1.89	701	152	1.03	13774	93.43
626	123	0.83	401	2.72	704	119	0.81	13893	94.23
628	175	1.19	576	3.91	706	127	0.86	14020	95.10
631	195	1.32	771	5.23	708	83	0.56	14103	95.66
633	248	1.68	1019	6.91	710	77	0.52	14180	96.18
635	240	1.63	1259	8.54	713	63	0.43	14243	96.61
638	304	2.06	1563	10.60	715	60	0.41	14303	97.02
640	310	2.10	1873	12.70	717	49	0.33	14352	97.35
642	355	2.41	2228	15.11	720	40	0.27	14392	97.62
644	351	2.38	2579	17.49	723	43	0.29	14435	97.91
646	352	2.39	2931	19.88	725	31	0.21	14466	98.12
648	371	2.52	3302	22.40	728	35	0.24	14501	98.36
651	362	2.46	3664	24.85	731	23	0.16	14524	98.51
653	395	2.68	4059	27.53	734	32	0.22	14556	98.73
655	392	2.66	4451	30.19	738	23	0.16	14579	98.89
657	434	2.94	4885	33.13	741	17	0.12	14596	99.00
659	437	2.96	5322	36.10	745	23	0.16	14619	99.16
660	445	3.02	5767	39.12	749	25	0.17	14644	99.33
662	490	3.32	6257	42.44	753	20	0.14	14664	99.46
664	454	3.08	6711	45.52	758	21	0.14	14685	99.61
666	451	3.06	7162	48.58	763	14	0.09	14699	99.70
668	451	3.06	7613	51.64	769	11	0.07	14710	99.78
670	492	3.34	8105	54.98	776	9	0.06	14719	99.84
672	491	3.33	8596	58.31	784	4	0.03	14723	99.86
674	485	3.29	9081	61.60	795	10	0.07	14733	99.93
676	488	3.31	9569	64.91	809	7	0.05	14740	99.98
678	440	2.98	10009	67.89	834	1	0.01	14741	99.99
680	467	3.17	10476	71.06	900	2	0.01	14743	100.00
682	438	2.97	10914	74.03					

Note. Freq.=Frequency, Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.16**  
**2007 Spring AIMS Frequency Distribution**  
**Mathematics CRT High School Cohort 07**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
584	1	0.01	1	0.01	683	148	2.12	5610	80.43
601	3	0.04	4	0.06	685	156	2.24	5766	82.67
605	6	0.09	10	0.14	687	125	1.79	5891	84.46
608	9	0.13	19	0.27	689	157	2.25	6048	86.71
612	6	0.09	25	0.36	691	117	1.68	6165	88.39
615	17	0.24	42	0.60	693	101	1.45	6266	89.84
618	29	0.42	71	1.02	695	86	1.23	6352	91.07
620	29	0.42	100	1.43	697	84	1.20	6436	92.27
623	59	0.85	159	2.28	699	65	0.93	6501	93.20
626	65	0.93	224	3.21	701	71	1.02	6572	94.22
628	93	1.33	317	4.54	704	50	0.72	6622	94.94
631	112	1.61	429	6.15	706	47	0.67	6669	95.61
633	143	2.05	572	8.20	708	37	0.53	6706	96.14
635	132	1.89	704	10.09	710	24	0.34	6730	96.49
638	155	2.22	859	12.32	713	34	0.49	6764	96.97
640	193	2.77	1052	15.08	715	24	0.34	6788	97.32
642	199	2.85	1251	17.94	717	22	0.32	6810	97.63
644	179	2.57	1430	20.50	720	16	0.23	6826	97.86
646	194	2.78	1624	23.28	723	18	0.26	6844	98.12
648	236	3.38	1860	26.67	725	13	0.19	6857	98.31
651	202	2.90	2062	29.56	728	14	0.20	6871	98.51
653	202	2.90	2264	32.46	731	15	0.22	6886	98.72
655	233	3.34	2497	35.80	734	11	0.16	6897	98.88
657	204	2.92	2701	38.72	738	11	0.16	6908	99.04
659	209	3.00	2910	41.72	741	9	0.13	6917	99.17
660	216	3.10	3126	44.82	745	9	0.13	6926	99.30
662	240	3.44	3366	48.26	749	5	0.07	6931	99.37
664	216	3.10	3582	51.35	753	7	0.10	6938	99.47
666	228	3.27	3810	54.62	758	8	0.11	6946	99.58
668	214	3.07	4024	57.69	763	9	0.13	6955	99.71
670	203	2.91	4227	60.60	769	3	0.04	6958	99.76
672	205	2.94	4432	63.54	776	2	0.03	6960	99.78
674	212	3.04	4644	66.58	784	6	0.09	6966	99.87
676	221	3.17	4865	69.75	795	4	0.06	6970	99.93
678	196	2.81	5061	72.56	809	4	0.06	6974	99.99
680	218	3.13	5279	75.68	834	1	0.01	6975	100.00
682	183	2.62	5462	78.31					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.17**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 3**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
231	1	0.00	1	0.00	420	1781	2.23	21159	26.52
294	1	0.00	2	0.00	424	1810	2.27	22969	28.79
305	4	0.01	6	0.01	427	1892	2.37	24861	31.16
314	26	0.03	32	0.04	431	1934	2.42	26795	33.59
322	35	0.04	67	0.08	435	2001	2.51	28796	36.10
329	82	0.10	149	0.19	439	2295	2.88	31091	38.97
336	145	0.18	294	0.37	443	2169	2.72	33260	41.69
342	235	0.29	529	0.66	446	2330	2.92	35590	44.61
347	373	0.47	902	1.13	451	2383	2.99	37973	47.60
352	494	0.62	1396	1.75	455	2503	3.14	40476	50.74
357	613	0.77	2009	2.52	459	2675	3.35	43151	54.09
362	707	0.89	2716	3.40	463	2694	3.38	45845	57.47
367	870	1.09	3586	4.50	468	2817	3.53	48662	61.00
371	937	1.17	4523	5.67	473	2926	3.67	51588	64.67
375	942	1.18	5465	6.85	478	3011	3.77	54599	68.44
379	1007	1.26	6472	8.11	483	3201	4.01	57800	72.45
383	1011	1.27	7483	9.38	489	3068	3.85	60868	76.30
387	1139	1.43	8622	10.81	496	3199	4.01	64067	80.31
391	1096	1.37	9718	12.18	503	3174	3.98	67241	84.29
395	1194	1.50	10912	13.68	511	3134	3.93	70375	88.22
398	1222	1.53	12134	15.21	520	2785	3.49	73160	91.71
402	1309	1.64	13443	16.85	530	2515	3.15	75675	94.86
406	1366	1.71	14809	18.56	544	1975	2.48	77650	97.34
409	1430	1.79	16239	20.36	562	1340	1.68	78990	99.02
413	1517	1.90	17756	22.26	592	637	0.80	79627	99.82
417	1622	2.03	19378	24.29	640	147	0.18	79774	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.18**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 4**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
307	2	0.00	2	0.00	430	1282	1.62	19051	24.03
319	5	0.01	7	0.01	433	1355	1.71	20406	25.74
329	8	0.01	15	0.02	436	1440	1.82	21846	27.56
337	25	0.03	40	0.05	439	1441	1.82	23287	29.38
344	52	0.07	92	0.12	443	1469	1.85	24756	31.23
350	105	0.13	197	0.25	446	1627	2.05	26383	33.28
356	191	0.24	388	0.49	449	1676	2.11	28059	35.40
361	297	0.37	685	0.86	453	1790	2.26	29849	37.65
366	436	0.55	1121	1.41	457	1929	2.43	31778	40.09
370	520	0.66	1641	2.07	460	2026	2.56	33804	42.64
375	715	0.90	2356	2.97	464	2151	2.71	35955	45.36
379	759	0.96	3115	3.93	468	2251	2.84	38206	48.20
383	919	1.16	4034	5.09	472	2368	2.99	40574	51.18
387	979	1.24	5013	6.32	477	2567	3.24	43141	54.42
390	995	1.26	6008	7.58	481	2752	3.47	45893	57.89
394	965	1.22	6973	8.80	486	3078	3.88	48971	61.78
397	979	1.24	7952	10.03	492	3275	4.13	52246	65.91
401	982	1.24	8934	11.27	498	3487	4.40	55733	70.31
404	1016	1.28	9950	12.55	504	3800	4.79	59533	75.10
407	1000	1.26	10950	13.81	511	3965	5.00	63498	80.10
411	1033	1.30	11983	15.12	519	4125	5.20	67623	85.31
414	1119	1.41	13102	16.53	529	3939	4.97	71562	90.28
417	1052	1.33	14154	17.86	542	3379	4.26	74941	94.54
420	1088	1.37	15242	19.23	558	2521	3.18	77462	97.72
423	1214	1.53	16456	20.76	586	1400	1.77	78862	99.49
426	1313	1.66	17769	22.42	660	408	0.51	79270	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.19**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 5**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
281	1	0.00	1	0.00	459	1547	1.94	20986	26.29
341	3	0.00	4	0.01	462	1684	2.11	22670	28.40
351	7	0.01	11	0.01	465	1787	2.24	24457	30.64
360	16	0.02	27	0.03	469	1924	2.41	26381	33.05
368	40	0.05	67	0.08	472	1952	2.45	28333	35.50
374	62	0.08	129	0.16	476	2110	2.64	30443	38.14
381	139	0.17	268	0.34	479	2187	2.74	32630	40.88
386	224	0.28	492	0.62	483	2302	2.88	34932	43.76
391	335	0.42	827	1.04	486	2552	3.20	37484	46.96
396	467	0.59	1294	1.62	490	2641	3.31	40125	50.27
401	610	0.76	1904	2.39	494	2836	3.55	42961	53.82
405	722	0.90	2626	3.29	498	2904	3.64	45865	57.46
409	857	1.07	3483	4.36	502	3047	3.82	48912	61.28
413	943	1.18	4426	5.54	507	3276	4.10	52188	65.38
417	1005	1.26	5431	6.80	511	3272	4.10	55460	69.48
421	1047	1.31	6478	8.12	516	3189	4.00	58649	73.48
425	1157	1.45	7635	9.57	522	3552	4.45	62201	77.93
428	1134	1.42	8769	10.99	528	3388	4.24	65589	82.17
432	1190	1.49	9959	12.48	534	3288	4.12	68877	86.29
435	1207	1.51	11166	13.99	541	2924	3.66	71801	89.95
439	1258	1.58	12424	15.56	550	2641	3.31	74442	93.26
442	1227	1.54	13651	17.10	560	2219	2.78	76661	96.04
446	1344	1.68	14995	18.79	572	1505	1.89	78166	97.93
449	1480	1.85	16475	20.64	590	1032	1.29	79198	99.22
452	1489	1.87	17964	22.51	619	496	0.62	79694	99.84
455	1475	1.85	19439	24.35	675	127	0.16	79821	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.20**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 6**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
329	2	0.00	2	0.00	469	1759	2.23	22394	28.40
353	6	0.01	8	0.01	473	1878	2.38	24272	30.79
362	19	0.02	27	0.03	476	1946	2.47	26218	33.25
370	29	0.04	56	0.07	480	2074	2.63	28292	35.88
377	74	0.09	130	0.16	484	2136	2.71	30428	38.59
383	142	0.18	272	0.34	487	2196	2.79	32624	41.38
389	238	0.30	510	0.65	491	2471	3.13	35095	44.51
394	307	0.39	817	1.04	495	2555	3.24	37650	47.75
399	479	0.61	1296	1.64	499	2705	3.43	40355	51.18
404	569	0.72	1865	2.37	503	2679	3.40	43034	54.58
409	734	0.93	2599	3.30	508	2845	3.61	45879	58.19
413	795	1.01	3394	4.30	512	2873	3.64	48752	61.84
417	825	1.05	4219	5.35	517	3101	3.93	51853	65.77
422	905	1.15	5124	6.50	522	3110	3.94	54963	69.71
426	978	1.24	6102	7.74	527	3150	4.00	58113	73.71
429	1015	1.29	7117	9.03	533	3177	4.03	61290	77.74
433	1105	1.40	8222	10.43	539	3124	3.96	64414	81.70
437	1134	1.44	9356	11.87	546	3110	3.94	67524	85.64
441	1163	1.48	10519	13.34	554	3039	3.85	70563	89.50
444	1194	1.51	11713	14.86	562	2563	3.25	73126	92.75
448	1288	1.63	13001	16.49	573	2248	2.85	75374	95.60
452	1381	1.75	14382	18.24	586	1637	2.08	77011	97.68
455	1434	1.82	15816	20.06	603	1117	1.42	78128	99.09
459	1529	1.94	17345	22.00	633	551	0.70	78679	99.79
462	1557	1.97	18902	23.97	690	163	0.21	78842	100.00
466	1733	2.20	20635	26.17					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.21**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 7**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
290	1	0.00	1	0.00	477	1636	2.06	21260	26.83
322	1	0.00	2	0.00	480	1617	2.04	22877	28.87
341	2	0.00	4	0.01	484	1650	2.08	24527	30.95
355	2	0.00	6	0.01	487	1777	2.24	26304	33.19
366	7	0.01	13	0.02	491	1890	2.38	28194	35.58
375	19	0.02	32	0.04	495	1915	2.42	30109	37.99
383	37	0.05	69	0.09	498	1942	2.45	32051	40.44
390	87	0.11	156	0.20	502	2091	2.64	34142	43.08
397	137	0.17	293	0.37	506	2219	2.80	36361	45.88
403	256	0.32	549	0.69	510	2302	2.90	38663	48.79
408	356	0.45	905	1.14	514	2345	2.96	41008	51.75
413	530	0.67	1435	1.81	519	2591	3.27	43599	55.02
418	667	0.84	2102	2.65	523	2624	3.31	46223	58.33
423	836	1.05	2938	3.71	528	2630	3.32	48853	61.65
427	943	1.19	3881	4.90	533	2833	3.57	51686	65.22
432	1096	1.38	4977	6.28	538	2833	3.57	54519	68.80
436	1136	1.43	6113	7.71	543	2933	3.70	57452	72.50
440	1187	1.50	7300	9.21	549	3104	3.92	60556	76.42
444	1191	1.50	8491	10.71	556	3118	3.93	63674	80.35
448	1286	1.62	9777	12.34	563	3001	3.79	66675	84.14
451	1302	1.64	11079	13.98	571	2867	3.62	69542	87.75
455	1306	1.65	12385	15.63	580	2805	3.54	72347	91.29
459	1332	1.68	13717	17.31	591	2384	3.01	74731	94.30
462	1397	1.76	15114	19.07	605	2007	2.53	76738	96.84
466	1501	1.89	16615	20.97	624	1438	1.81	78176	98.65
470	1479	1.87	18094	22.83	655	821	1.04	78997	99.69
473	1530	1.93	19624	24.76	720	249	0.31	79246	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.22**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT Grade 8**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
270	1	0.00	1	0.00	485	1885	2.42	22932	29.46
326	1	0.00	2	0.00	489	1926	2.47	24858	31.93
342	1	0.00	3	0.00	494	2035	2.61	26893	34.55
365	8	0.01	11	0.01	498	2004	2.57	28897	37.12
374	19	0.02	30	0.04	502	2126	2.73	31023	39.85
382	50	0.06	80	0.10	506	2133	2.74	33156	42.59
390	86	0.11	166	0.21	511	2312	2.97	35468	45.56
396	170	0.22	336	0.43	515	2379	3.06	37847	48.62
403	286	0.37	622	0.80	520	2561	3.29	40408	51.91
409	373	0.48	995	1.28	524	2563	3.29	42971	55.20
414	568	0.73	1563	2.01	529	2657	3.41	45628	58.61
420	658	0.85	2221	2.85	535	2689	3.45	48317	62.07
425	766	0.98	2987	3.84	540	2773	3.56	51090	65.63
430	960	1.23	3947	5.07	545	2748	3.53	53838	69.16
434	1006	1.29	4953	6.36	551	2772	3.56	56610	72.72
439	1090	1.40	6043	7.76	558	2897	3.72	59507	76.44
443	1278	1.64	7321	9.40	565	2823	3.63	62330	80.07
448	1276	1.64	8597	11.04	572	2776	3.57	65106	83.63
452	1387	1.78	9984	12.82	580	2677	3.44	67783	87.07
456	1322	1.70	11306	14.52	589	2578	3.31	70361	90.38
461	1499	1.93	12805	16.45	600	2259	2.90	72620	93.28
465	1490	1.91	14295	18.36	612	1994	2.56	74614	95.84
469	1559	2.00	15854	20.37	628	1496	1.92	76110	97.77
473	1692	2.17	17546	22.54	650	1078	1.38	77188	99.15
477	1678	2.16	19224	24.69	686	523	0.67	77711	99.82
481	1823	2.34	21047	27.04	800	138	0.18	77849	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.23**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT High School Cohort 09**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	7	0.01	7	0.01	664	1434	1.94	17439	23.54
507	4	0.01	11	0.01	668	1594	2.15	19033	25.70
526	4	0.01	15	0.02	672	1677	2.26	20710	27.96
540	8	0.01	23	0.03	675	1757	2.37	22467	30.33
551	4	0.01	27	0.04	679	1825	2.46	24292	32.80
560	14	0.02	41	0.06	683	1961	2.65	26253	35.44
568	34	0.05	75	0.10	687	2146	2.90	28399	38.34
575	44	0.06	119	0.16	691	2169	2.93	30568	41.27
582	111	0.15	230	0.31	695	2317	3.13	32885	44.40
588	175	0.24	405	0.55	699	2518	3.40	35403	47.80
594	276	0.37	681	0.92	703	2459	3.32	37862	51.12
599	408	0.55	1089	1.47	707	2583	3.49	40445	54.60
604	474	0.64	1563	2.11	712	2726	3.68	43171	58.28
609	638	0.86	2201	2.97	717	2789	3.77	45960	62.05
613	739	1.00	2940	3.97	722	2862	3.86	48822	65.91
618	836	1.13	3776	5.10	727	2947	3.98	51769	69.89
622	921	1.24	4697	6.34	733	3039	4.10	54808	73.99
626	923	1.25	5620	7.59	739	2975	4.02	57783	78.01
630	1025	1.38	6645	8.97	745	2981	4.02	60764	82.03
634	1067	1.44	7712	10.41	752	2876	3.88	63640	85.92
638	983	1.33	8695	11.74	760	2738	3.70	66378	89.61
642	1051	1.42	9746	13.16	770	2505	3.38	68883	93.00
646	1143	1.54	10889	14.70	781	2019	2.73	70902	95.72
650	1179	1.59	12068	16.29	795	1565	2.11	72467	97.83
653	1231	1.66	13299	17.95	814	987	1.33	73454	99.17
657	1285	1.73	14584	19.69	845	479	0.65	73933	99.81
661	1421	1.92	16005	21.61	900	138	0.19	74071	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.24**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT High School Cohort 08**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	1	0.01	1	0.01	668	473	3.91	7830	64.73
507	1	0.01	2	0.02	672	497	4.11	8327	68.84
540	2	0.02	4	0.03	675	481	3.98	8808	72.82
551	9	0.07	13	0.11	679	447	3.70	9255	76.51
560	7	0.06	20	0.17	683	442	3.65	9697	80.17
568	9	0.07	29	0.24	687	369	3.05	10066	83.22
575	25	0.21	54	0.45	691	309	2.55	10375	85.77
582	47	0.39	101	0.83	695	280	2.31	10655	88.09
588	99	0.82	200	1.65	699	254	2.10	10909	90.19
594	129	1.07	329	2.72	703	210	1.74	11119	91.92
599	182	1.50	511	4.22	707	166	1.37	11285	93.30
604	222	1.84	733	6.06	712	113	0.93	11398	94.23
609	293	2.42	1026	8.48	717	118	0.98	11516	95.21
613	313	2.59	1339	11.07	722	106	0.88	11622	96.08
618	371	3.07	1710	14.14	727	81	0.67	11703	96.75
622	401	3.32	2111	17.45	733	64	0.53	11767	97.28
626	446	3.69	2557	21.14	739	70	0.58	11837	97.86
630	440	3.64	2997	24.78	745	53	0.44	11890	98.30
634	436	3.60	3433	28.38	752	47	0.39	11937	98.69
638	457	3.78	3890	32.16	760	42	0.35	11979	99.03
642	454	3.75	4344	35.91	770	38	0.31	12017	99.35
646	477	3.94	4821	39.86	781	33	0.27	12050	99.62
650	505	4.17	5326	44.03	795	24	0.20	12074	99.82
653	478	3.95	5804	47.98	814	14	0.12	12088	99.93
657	506	4.18	6310	52.17	845	4	0.03	12092	99.97
661	526	4.35	6836	56.51	900	4	0.03	12096	100.00
664	521	4.31	7357	60.82					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.25**  
**2007 Spring AIMS Frequency Distribution**  
**Reading CRT High School Cohort 07**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	1	0.02	1	0.02	668	229	4.16	3824	69.46
507	2	0.04	3	0.05	672	217	3.94	4041	73.41
551	4	0.07	7	0.13	675	214	3.89	4255	77.29
560	5	0.09	12	0.22	679	203	3.69	4458	80.98
568	3	0.05	15	0.27	683	161	2.92	4619	83.91
575	17	0.31	32	0.58	687	147	2.67	4766	86.58
582	25	0.45	57	1.04	691	120	2.18	4886	88.76
588	46	0.84	103	1.87	695	98	1.78	4984	90.54
594	75	1.36	178	3.23	699	97	1.76	5081	92.30
599	117	2.13	295	5.36	703	66	1.20	5147	93.50
604	136	2.47	431	7.83	707	49	0.89	5196	94.39
609	156	2.83	587	10.66	712	58	1.05	5254	95.44
613	156	2.83	743	13.50	717	38	0.69	5292	96.13
618	175	3.18	918	16.68	722	43	0.78	5335	96.91
622	213	3.87	1131	20.54	727	30	0.54	5365	97.46
626	210	3.81	1341	24.36	733	17	0.31	5382	97.77
630	193	3.51	1534	27.87	739	16	0.29	5398	98.06
634	234	4.25	1768	32.12	745	15	0.27	5413	98.33
638	233	4.23	2001	36.35	752	15	0.27	5428	98.60
642	201	3.65	2202	40.00	760	24	0.44	5452	99.04
646	210	3.81	2412	43.81	770	20	0.36	5472	99.40
650	248	4.50	2660	48.32	781	10	0.18	5482	99.58
653	208	3.78	2868	52.10	795	13	0.24	5495	99.82
657	224	4.07	3092	56.17	814	5	0.09	5500	99.91
661	255	4.63	3347	60.80	845	4	0.07	5504	99.98
664	248	4.50	3595	65.30	900	1	0.02	5505	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.26**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 3**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
200	3487	4.36	3487	4.36
302	115	0.14	3602	4.50
317	232	0.29	3834	4.79
329	652	0.81	4486	5.61
340	246	0.31	4732	5.91
350	479	0.60	5211	6.51
361	1702	2.13	6913	8.64
372	797	1.00	7710	9.63
382	1232	1.54	8942	11.17
392	2457	3.07	11399	14.24
403	1477	1.85	12876	16.09
415	2556	3.19	15432	19.28
428	6705	8.38	22137	27.66
440	2979	3.72	25116	31.38
452	4165	5.20	29281	36.59
463	7517	9.39	36798	45.98
474	3588	4.48	40386	50.47
487	6052	7.56	46438	58.03
500	15309	19.13	61747	77.16
512	2989	3.73	64736	80.89
523	2802	3.50	67538	84.39
532	4795	5.99	72333	90.39
540	1226	1.53	73559	91.92
549	1294	1.62	74853	93.53
557	2448	3.06	77301	96.59
565	474	0.59	77775	97.19
573	485	0.61	78260	97.79
583	1046	1.31	79306	99.10
595	124	0.15	79430	99.25
614	144	0.18	79574	99.43
650	453	0.57	80027	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.27**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 4**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
230	3433	4.32	3433	4.32
332	159	0.20	3592	4.52
349	210	0.26	3802	4.78
362	791	0.99	4593	5.77
373	325	0.41	4918	6.18
386	521	0.66	5439	6.84
399	1996	2.51	7435	9.35
413	899	1.13	8334	10.48
425	1161	1.46	9495	11.94
436	2847	3.58	12342	15.52
447	1707	2.15	14049	17.66
458	2802	3.52	16851	21.19
470	10334	12.99	27185	34.18
482	3668	4.61	30853	38.79
493	4111	5.17	34964	43.96
503	8836	11.11	43800	55.07
514	3583	4.50	47383	59.57
526	4610	5.80	51993	65.37
540	13774	17.32	65767	82.68
553	2317	2.91	68084	85.60
565	1990	2.50	70074	88.10
575	4038	5.08	74112	93.17
585	929	1.17	75041	94.34
594	930	1.17	75971	95.51
604	1859	2.34	77830	97.85
613	331	0.42	78161	98.27
623	343	0.43	78504	98.70
633	651	0.82	79155	99.51
644	75	0.09	79230	99.61
661	85	0.11	79315	99.72
700	226	0.28	79541	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.28**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 5**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
255	1851	2.31	1851	2.31
350	198	0.25	2049	2.56
365	154	0.19	2203	2.75
378	689	0.86	2892	3.61
392	351	0.44	3243	4.05
406	432	0.54	3675	4.59
420	2079	2.60	5754	7.19
433	1272	1.59	7026	8.78
446	1349	1.69	8375	10.47
457	3070	3.84	11445	14.30
470	2324	2.90	13769	17.21
482	2952	3.69	16721	20.89
495	9072	11.34	25793	32.23
508	5632	7.04	31425	39.27
519	4694	5.87	36119	45.14
531	7894	9.86	44013	55.00
544	5211	6.51	49224	61.51
557	5217	6.52	54441	68.03
571	12099	15.12	66540	83.15
583	3462	4.33	70002	87.48
594	2193	2.74	72195	90.22
604	3194	3.99	75389	94.21
614	1121	1.40	76510	95.61
624	868	1.08	77378	96.69
634	1364	1.70	78742	98.40
644	361	0.45	79103	98.85
655	266	0.33	79369	99.18
667	368	0.46	79737	99.64
684	76	0.09	79813	99.74
727	67	0.08	79880	99.82
740	144	0.18	80024	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.29**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 6**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
275	2480	3.14	2480	3.14
371	222	0.28	2702	3.42
385	219	0.28	2921	3.70
399	652	0.83	3573	4.53
413	426	0.54	3999	5.07
430	495	0.63	4494	5.70
447	1997	2.53	6491	8.23
461	1911	2.42	8402	10.65
473	1629	2.06	10031	12.71
486	3520	4.46	13551	17.17
499	3273	4.15	16824	21.32
513	3922	4.97	20746	26.29
527	12360	15.66	33106	41.95
540	10280	13.03	43386	54.98
552	5105	6.47	48491	61.45
564	7430	9.42	55921	70.87
578	6208	7.87	62129	78.73
594	4019	5.09	66148	83.83
609	7051	8.94	73199	92.76
623	1740	2.21	74939	94.97
634	1049	1.33	75988	96.30
645	1454	1.84	77442	98.14
655	502	0.64	77944	98.78
666	305	0.39	78249	99.16
676	358	0.45	78607	99.62
687	107	0.14	78714	99.75
698	63	0.08	78777	99.83
711	90	0.11	78867	99.95
727	17	0.02	78884	99.97
743	16	0.02	78900	99.99
760	9	0.01	78909	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.30**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 7**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
290	1704	2.15	1704	2.15
373	236	0.30	1940	2.44
388	262	0.33	2202	2.77
401	911	1.15	3113	3.92
415	463	0.58	3576	4.51
432	592	0.75	4168	5.25
452	2546	3.21	6714	8.46
468	1119	1.41	7833	9.87
481	1242	1.56	9075	11.43
494	3353	4.22	12428	15.66
507	2153	2.71	14581	18.37
523	2955	3.72	17536	22.09
540	10089	12.71	27625	34.80
554	3826	4.82	31451	39.62
567	4054	5.11	35505	44.73
578	9306	11.72	44811	56.46
590	4208	5.30	49019	61.76
602	5021	6.33	54040	68.08
614	12834	16.17	66874	84.25
625	2664	3.36	69538	87.61
634	2027	2.55	71565	90.16
642	3384	4.26	74949	94.43
650	975	1.23	75924	95.65
657	806	1.02	76730	96.67
664	1302	1.64	78032	98.31
672	287	0.36	78319	98.67
680	320	0.40	78639	99.07
690	464	0.58	79103	99.66
717	73	0.09	79176	99.75
744	74	0.09	79250	99.84
770	124	0.16	79374	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.31**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT Grade 8**

Scale Score	Freq.	%	Cum. Freq.	Cum. %
300	1203	1.54	1203	1.54
342	142	0.18	1345	1.73
360	122	0.16	1467	1.88
373	498	0.64	1965	2.52
386	206	0.26	2171	2.78
400	346	0.44	2517	3.23
415	1726	2.21	4243	5.44
429	682	0.87	4925	6.32
442	806	1.03	5731	7.35
455	2503	3.21	8234	10.56
467	1389	1.78	9623	12.34
483	1955	2.51	11578	14.85
501	9349	11.99	20927	26.84
519	3402	4.36	24329	31.20
534	3799	4.87	28128	36.08
547	9710	12.45	37838	48.53
560	3567	4.57	41405	53.10
574	4765	6.11	46170	59.22
590	16940	21.73	63110	80.94
605	2938	3.77	66048	84.71
617	2196	2.82	68244	87.53
627	4566	5.86	72810	93.38
636	1032	1.32	73842	94.71
645	859	1.10	74701	95.81
653	1849	2.37	76550	98.18
661	315	0.40	76865	98.58
670	289	0.37	77154	98.95
680	558	0.72	77712	99.67
692	46	0.06	77758	99.73
710	43	0.06	77801	99.78
800	168	0.22	77969	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, and students attending state hospital schools are not included in this summary.

**Table 8.1.1.32**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 09 Prompt A**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	589	0.82	589	0.82	695	2990	4.17	30383	42.34
523	80	0.11	669	0.93	700	3378	4.71	33761	47.05
546	68	0.09	737	1.03	707	4741	6.61	38502	53.66
552	134	0.19	871	1.21	713	3752	5.23	42254	58.89
557	86	0.12	957	1.33	720	4308	6.00	46562	64.89
562	74	0.10	1031	1.44	726	8154	11.36	54716	76.25
567	121	0.17	1152	1.61	732	2939	4.10	57655	80.35
572	109	0.15	1261	1.76	738	2306	3.21	59961	83.56
577	107	0.15	1368	1.91	743	2664	3.71	62625	87.27
582	202	0.28	1570	2.19	747	1505	2.10	64130	89.37
587	183	0.26	1753	2.44	752	1207	1.68	65337	91.05
593	186	0.26	1939	2.70	756	1344	1.87	66681	92.93
598	411	0.57	2350	3.27	760	865	1.21	67546	94.13
603	326	0.45	2676	3.73	764	764	1.06	68310	95.20
608	319	0.44	2995	4.17	768	754	1.05	69064	96.25
613	468	0.65	3463	4.83	772	523	0.73	69587	96.98
617	451	0.63	3914	5.45	777	439	0.61	70026	97.59
622	486	0.68	4400	6.13	781	431	0.60	70457	98.19
626	639	0.89	5039	7.02	785	257	0.36	70714	98.55
631	642	0.89	5681	7.92	789	215	0.30	70929	98.85
636	758	1.06	6439	8.97	794	220	0.31	71149	99.15
642	1116	1.56	7555	10.53	798	153	0.21	71302	99.37
648	1110	1.55	8665	12.08	803	105	0.15	71407	99.51
654	1403	1.96	10068	14.03	807	127	0.18	71534	99.69
660	2428	3.38	12496	17.41	814	56	0.08	71590	99.77
666	2019	2.81	14515	20.23	820	47	0.07	71637	99.83
671	1969	2.74	16484	22.97	833	57	0.08	71694	99.91
676	2732	3.81	19216	26.78	845	26	0.04	71720	99.95
680	2368	3.30	21584	30.08	873	11	0.02	71731	99.97
685	2535	3.53	24119	33.61	900	25	0.03	71756	100.00
690	3274	4.56	27393	38.18					

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.33**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 09 Prompt T**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	73	3.55	73	3.55	686	71	3.45	1136	55.25
524	3	0.15	76	3.70	690	110	5.35	1246	60.60
547	2	0.10	78	3.79	696	76	3.70	1322	64.30
553	8	0.39	86	4.18	701	90	4.38	1412	68.68
558	10	0.49	96	4.67	708	99	4.82	1511	73.49
563	3	0.15	99	4.82	714	73	3.55	1584	77.04
567	18	0.88	117	5.69	721	80	3.89	1664	80.93
572	6	0.29	123	5.98	727	130	6.32	1794	87.26
577	4	0.19	127	6.18	733	42	2.04	1836	89.30
583	17	0.83	144	7.00	738	47	2.29	1883	91.59
588	6	0.29	150	7.30	743	36	1.75	1919	93.34
593	11	0.54	161	7.83	748	19	0.92	1938	94.26
598	34	1.65	195	9.48	752	23	1.12	1961	95.38
603	17	0.83	212	10.31	756	15	0.73	1976	96.11
608	12	0.58	224	10.89	760	17	0.83	1993	96.94
613	34	1.65	258	12.55	764	10	0.49	2003	97.42
617	26	1.26	284	13.81	769	11	0.54	2014	97.96
622	30	1.46	314	15.27	773	5	0.24	2019	98.20
627	42	2.04	356	17.32	777	6	0.29	2025	98.49
632	24	1.17	380	18.48	781	3	0.15	2028	98.64
637	43	2.09	423	20.57	786	5	0.24	2033	98.88
643	64	3.11	487	23.69	790	4	0.19	2037	99.08
648	53	2.58	540	26.26	794	9	0.44	2046	99.51
654	66	3.21	606	29.47	798	1	0.05	2047	99.56
660	122	5.93	728	35.41	808	3	0.15	2050	99.71
666	94	4.57	822	39.98	814	1	0.05	2051	99.76
671	74	3.60	896	43.58	840	2	0.10	2053	99.85
676	81	3.94	977	47.52	860	2	0.10	2055	99.95
681	88	4.28	1065	51.80	900	1	0.05	2056	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.34**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 08 Prompt A**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	254	2.49	254	2.49	685	410	4.03	7505	73.69
523	28	0.27	282	2.77	690	480	4.71	7985	78.41
546	29	0.28	311	3.05	695	335	3.29	8320	81.70
552	65	0.64	376	3.69	700	317	3.11	8637	84.81
557	41	0.40	417	4.09	707	346	3.40	8983	88.21
562	38	0.37	455	4.47	713	255	2.50	9238	90.71
567	76	0.75	531	5.21	720	240	2.36	9478	93.07
572	55	0.54	586	5.75	726	323	3.17	9801	96.24
577	70	0.69	656	6.44	732	93	0.91	9894	97.15
582	81	0.80	737	7.24	738	67	0.66	9961	97.81
587	88	0.86	825	8.10	743	63	0.62	10024	98.43
593	94	0.92	919	9.02	747	33	0.32	10057	98.75
598	177	1.74	1096	10.76	752	18	0.18	10075	98.93
603	160	1.57	1256	12.33	756	28	0.27	10103	99.20
608	181	1.78	1437	14.11	760	17	0.17	10120	99.37
613	196	1.92	1633	16.03	764	13	0.13	10133	99.50
617	206	2.02	1839	18.06	768	12	0.12	10145	99.62
622	209	2.05	2048	20.11	772	9	0.09	10154	99.71
626	304	2.99	2352	23.10	777	4	0.04	10158	99.74
631	260	2.55	2612	25.65	781	4	0.04	10162	99.78
636	309	3.03	2921	28.68	785	4	0.04	10166	99.82
642	455	4.47	3376	33.15	789	4	0.04	10170	99.86
648	425	4.17	3801	37.32	794	3	0.03	10173	99.89
654	482	4.73	4283	42.06	798	3	0.03	10176	99.92
660	757	7.43	5040	49.49	803	3	0.03	10179	99.95
666	519	5.10	5559	54.59	814	1	0.01	10180	99.96
671	482	4.73	6041	59.32	820	2	0.02	10182	99.98
676	606	5.95	6647	65.27	833	1	0.01	10183	99.99
680	448	4.40	7095	69.67	845	1	0.01	10184	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.35**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 08 Prompt T**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	29	3.21	29	3.21	671	51	5.65	570	63.12
524	3	0.33	32	3.54	676	53	5.87	623	68.99
547	3	0.33	35	3.88	681	32	3.54	655	72.54
553	7	0.78	42	4.65	686	38	4.21	693	76.74
558	7	0.78	49	5.43	690	29	3.21	722	79.96
563	2	0.22	51	5.65	696	26	2.88	748	82.83
567	5	0.55	56	6.20	701	24	2.66	772	85.49
572	7	0.78	63	6.98	708	31	3.43	803	88.93
577	6	0.66	69	7.64	714	21	2.33	824	91.25
583	7	0.78	76	8.42	721	18	1.99	842	93.24
588	8	0.89	84	9.30	727	25	2.77	867	96.01
593	7	0.78	91	10.08	733	10	1.11	877	97.12
598	23	2.55	114	12.62	738	2	0.22	879	97.34
603	7	0.78	121	13.40	743	5	0.55	884	97.90
608	18	1.99	139	15.39	748	4	0.44	888	98.34
613	14	1.55	153	16.94	756	3	0.33	891	98.67
617	19	2.10	172	19.05	760	1	0.11	892	98.78
622	21	2.33	193	21.37	764	3	0.33	895	99.11
627	17	1.88	210	23.26	769	1	0.11	896	99.22
632	25	2.77	235	26.02	777	1	0.11	897	99.34
637	30	3.32	265	29.35	790	1	0.11	898	99.45
643	38	4.21	303	33.55	794	1	0.11	899	99.56
648	24	2.66	327	36.21	798	1	0.11	900	99.67
654	45	4.98	372	41.20	803	1	0.11	901	99.78
660	78	8.64	450	49.83	880	1	0.11	902	99.89
666	69	7.64	519	57.48	900	1	0.11	903	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.36**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 07 Prompt A**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	116	2.72	116	2.72	671	197	4.61	3006	70.37
523	20	0.47	136	3.18	676	203	4.75	3209	75.12
546	10	0.23	146	3.42	680	154	3.60	3363	78.72
552	33	0.77	179	4.19	685	144	3.37	3507	82.09
557	23	0.54	202	4.73	690	148	3.46	3655	85.56
562	23	0.54	225	5.27	695	108	2.53	3763	88.09
567	41	0.96	266	6.23	700	94	2.20	3857	90.29
572	38	0.89	304	7.12	707	110	2.57	3967	92.86
577	43	1.01	347	8.12	713	52	1.22	4019	94.08
582	62	1.45	409	9.57	720	65	1.52	4084	95.60
587	63	1.47	472	11.05	726	87	2.04	4171	97.64
593	53	1.24	525	12.29	732	15	0.35	4186	97.99
598	108	2.53	633	14.82	738	17	0.40	4203	98.38
603	88	2.06	721	16.88	743	23	0.54	4226	98.92
608	108	2.53	829	19.41	747	7	0.16	4233	99.09
613	120	2.81	949	22.21	752	6	0.14	4239	99.23
617	90	2.11	1039	24.32	756	9	0.21	4248	99.44
622	121	2.83	1160	27.15	760	3	0.07	4251	99.51
626	165	3.86	1325	31.02	764	6	0.14	4257	99.65
631	149	3.49	1474	34.50	768	5	0.12	4262	99.77
636	169	3.96	1643	38.46	772	3	0.07	4265	99.84
642	204	4.78	1847	43.24	777	1	0.02	4266	99.86
648	189	4.42	2036	47.66	785	1	0.02	4267	99.88
654	215	5.03	2251	52.69	794	2	0.05	4269	99.93
660	339	7.94	2590	60.63	798	2	0.05	4271	99.98
666	219	5.13	2809	65.75	873	1	0.02	4272	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

**Table 8.1.1.37**  
**2007 Spring AIMS Frequency Distribution**  
**Writing CRT High School Cohort 07 Prompt T**

Scale Score	Freq.	%	Cum. Freq.	Cum. %	Scale Score	Freq.	%	Cum. Freq.	Cum. %
500	12	3.20	12	3.20	643	11	2.93	153	40.80
524	2	0.53	14	3.73	648	8	2.13	161	42.93
547	3	0.80	17	4.53	654	20	5.33	181	48.27
553	4	1.07	21	5.60	660	30	8.00	211	56.27
558	2	0.53	23	6.13	666	21	5.60	232	61.87
563	1	0.27	24	6.40	671	19	5.07	251	66.93
567	6	1.60	30	8.00	676	18	4.80	269	71.73
572	2	0.53	32	8.53	681	20	5.33	289	77.07
577	4	1.07	36	9.60	686	15	4.00	304	81.07
583	3	0.80	39	10.40	690	5	1.33	309	82.40
588	8	2.13	47	12.53	696	8	2.13	317	84.53
593	3	0.80	50	13.33	701	10	2.67	327	87.20
598	15	4.00	65	17.33	708	13	3.47	340	90.67
603	7	1.87	72	19.20	714	6	1.60	346	92.27
608	11	2.93	83	22.13	721	7	1.87	353	94.13
613	6	1.60	89	23.73	727	14	3.73	367	97.87
617	8	2.13	97	25.87	733	3	0.80	370	98.67
622	9	2.40	106	28.27	738	2	0.53	372	99.20
627	10	2.67	116	30.93	743	1	0.27	373	99.47
632	11	2.93	127	33.87	781	1	0.27	374	99.73
637	15	4.00	142	37.87	820	1	0.27	375	100.00

Note. Freq.=Frequency; Cum.=Cumulative. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections facilities, students attending state hospital schools, and students who met expectations in a previous administration are not included in this summary.

### 8.1.2 AIMS DPA NRT State Results

This section of the technical report provides information on the results of the norm-referenced scores provided by the AIMS DPA. Students in grades 3-8 were administered a number of *TerraNova* items embedded within the AIMS DPA to provide norm-referenced scores. Please see Parts 3 and 4 of this report for more details on the design of the AIMS DPA. The AIMS DPA provided scale scores on the *TerraNova* vertical scale. In addition to scale scores, Arizona students were also assigned norm-referenced scores based on their scale scores and the 2000 *TerraNova* norms. For more information regarding the development of *TerraNova* norms please see *TerraNova, The Second Edition: California Achievement Tests Technical Report* (CTB/McGraw-Hill, 2003) and *TerraNova, The Second Edition, Norms Book* (CTB, 2001).

Table 8.1.2.1 presents norm-referenced results from the 2007 Spring AIMS DPA. Included in the table for each grade and content are the mean (M), standard deviation (SD), and scales scores at the 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles for both the Arizona students (AZ) and the *TerraNova* national standardization data.

**Table 8.1.2.1**  
**2007 Spring AIMS NRT State Test Results**

Test		N	M	SD	Percentile		
					25	50	75
<b>Mathematics</b>							
3	AZ	80072	608.7	45.2	582	609	634
	TN	1819	604.5	39.4	583	609	632
4	AZ	79500	636.1	49.3	611	637	660
	TN	1756	619.7	47.8	605	632	655
5	AZ	79991	648.0	51.1	620	648	673
	TN	1726	635.0	48.3	620	649	675
6	AZ	78793	670.2	56.1	643	674	700
	TN	1786	655.5	49.2	639	666	692
7	AZ	78944	673.8	51.6	649	678	704
	TN	1784	657.7	47.8	644	675	702
8	AZ	77527	692.8	54.0	664	697	726
	TN	1646	674.2	51.3	658	689	718
<b>Reading</b>							
3	AZ	79774	621.9	46.9	599	626	650
	TN	1886	624.1	41.7	606	631	655
4	AZ	79270	639.6	50.8	618	641	662
	TN	1882	631.4	47.6	616	644	668
5	AZ	79821	657.1	45.5	636	659	682
	TN	1596	648.5	46.8	631	657	681
6	AZ	78842	664.4	45.1	641	666	690
	TN	1773	650.6	46.7	633	660	686
7	AZ	79246	665.5	53.1	640	673	697
	TN	1852	648.2	54.4	639	667	693
8	AZ	77849	680.5	48.0	652	680	708
	TN	1666	662.8	50.5	646	676	704

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

(table continues)

**Table 8.1.2.1**  
**2007 Spring AIMS NRT State Test Results (continued)**

Test		N	M	SD	Percentile		
					25	50	75
<b>Language</b>							
3	AZ	79774	619.6	38.9	600	621	642
	TN	1886	621.2	40.2	602	626	650
4	AZ	79270	640.5	45.1	619	643	665
	TN	1882	632.0	45.0	616	642	665
5	AZ	79821	654.4	52.0	635	657	680
	TN	1596	644.8	51.6	631	655	678
6	AZ	78842	655.3	51.7	637	658	680
	TN	1773	649.2	46.4	633	658	682
7	AZ	79246	668.0	47.1	645	669	692
	TN	1852	648.4	53.5	637	664	687
8	AZ	77849	673.6	43.4	653	675	695
	TN	1666	657.5	49.3	643	670	696

Note. AZ=Arizona NRT; TN=TerraNova National Standardization Sample. Source for TN data *TerraNova, The Second Edition* Technical Report (2003) by CTB/McGraw-Hill. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in the AZ NRT data summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, and students attending state hospital schools are not included in the AZ NRT summary. The AZ NRT results are not final results and are presented here for purposes of addressing reliability and validity. AZ NRT results should not be used for accountability purposes.

## 8.2 Longitudinal Data

The Spring 2005 administration of the AIMS assessments represents the baseline year for the AIMS testing program. During the 2005 administration a new vertical scale was established for Grades 3-8, new scales were established for the high school assessments, and new cut scores were assigned for each grade and content area. In this section, the Spring 2007 results are presented along with the 2005 and 2006 results to provide longitudinal information. Tables 8.2.1-8.2.6 include scale score descriptive statistics and performance level distributions for 2005, 2006, and 2007 AIMS administrations. Caution should be taken when interpreting year-to-year comparisons, as slight differences in exclusion rules, changes in the manner in which accommodations were identified, and changes in the manner in which high school results were separated into grades (2005) and cohorts (2006 and 2007) may result in different student population characteristics reported in Tables 8.2.1-8.2.6.

**Table 8.2.1**  
**Longitudinal Comparison of Scale Scores**  
**Mathematics CRT**

Grade	Year	N	Scale Score		Percentiles				
			M	SD	P10	P25	P50	P75	P90
3	2005	77443	448.03	50.28	383	411	445	481	512
	2006	79060	447.37	48.15	387	414	447	477	505
	2007	80072	450.12	49.24	388	415	448	484	515
4	2005	76152	476.55	53.20	407	440	478	511	539
	2006	79384	482.45	53.93	411	444	481	517	554
	2007	79500	485.07	55.71	411	447	488	522	553
5	2005	76719	501.46	54.34	433	462	499	538	566
	2006	78460	504.49	54.43	438	466	501	542	570
	2007	79991	505.36	53.42	438	466	502	537	571
6	2005	75884	515.57	57.72	441	475	515	556	594
	2006	78455	517.75	58.26	445	476	514	553	596
	2007	78793	522.59	61.85	443	477	521	564	608
7	2005	77084	539.32	54.28	469	500	538	572	605
	2006	77414	543.49	56.18	470	502	543	578	614
	2007	78944	545.91	56.15	473	505	545	580	617
8	2005	75599	552.01	58.62	477	508	552	590	623
	2006	77311	554.40	59.18	478	510	553	593	626
	2007	77527	556.83	60.66	479	514	553	594	636
HS	2005 (Grade 10)	66788	704.70	46.06	648	672	702	734	766
	2006 (Cohort 08)	70193	701.62	42.44	648	670	699	729	755
	2007 (Cohort 09)	71315	703.61	42.5	651	672	701	731	758
HS	2005 (Grade 11)	27209	685.99	32.40	642	664	687	709	725
	2006 (Cohort 07)	13761	667.95	25.50	637	650	668	683	697
	2007 (Cohort 08)	14743	668.47	24.44	638	653	668	683	697
HS	2005 (Grade 12)	10191	664.70	29.73	629	642	662	685	704
	2006 (Cohort 06)	7421	668.33	27.39	637	650	666	683	699
	2007 (Cohort 07)	6975	665.68	24.33	635	648	664	680	695

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

**Table 8.2.2**  
**Longitudinal Comparison of Performance Level Distribution**  
**Mathematics CRT**

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77443	10	19	51	20
	2006	79060	10	18	54	18
	2007	80072	10	18	53	19
4	2005	76152	13	17	49	20
	2006	79384	10	17	49	24
	2007	79500	11	16	46	27
5	2005	76719	13	20	48	19
	2006	78460	13	19	49	19
	2007	79991	12	19	51	18
6	2005	75884	18	20	46	16
	2006	78455	18	19	46	16
	2007	78793	18	17	46	19
7	2005	77084	16	20	52	13
	2006	77414	15	17	52	15
	2007	78944	14	17	51	18
8	2005	75599	22	19	48	12
	2006	77311	21	19	47	12
	2007	77527	21	18	47	14
HS	2005 (Grade 10)	66788	22	12	49	17
	2006 (Cohort 08)	70193	22	12	51	14
	2007 (Cohort 09)	71315	21	12	54	13
HS	2005 (Grade 11)	27209	28	16	53	3
	2006 (Cohort 07)	13761	49	26	24	1
	2007 (Cohort 08)	14743	49	25	25	1
HS	2005 (Grade 12)	10191	55	18	26	1
	2006 (Cohort 06)	7421	50	24	24	2
	2007 (Cohort 07)	6975	55	24	21	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

**Table 8.2.3**  
**Longitudinal Comparison of Scale Scores**  
**Reading CRT**

Grade	Year	N	Scale Score		Percentiles			
			M	SD	P10	P25	P50	P75
3	2005	77047	448.29	51.03	379	413	451	486
	2006	78487	451.49	50.75	380	418	454	486
	2007	79774	455.24	50.92	387	420	455	489
4	2005	75685	468.70	53.56	398	431	469	506
	2006	78924	469.72	49.67	401	436	472	504
	2007	79270	470.71	52.12	397	433	472	504
5	2005	76379	486.68	48.19	421	451	489	517
	2006	78157	489.26	47.66	426	456	491	519
	2007	79821	489.76	45.39	428	459	490	522
6	2005	75940	494.22	49.30	427	460	493	526
	2006	78631	496.77	48.21	430	463	500	530
	2007	78842	498.99	48.38	433	466	499	533
7	2005	77541	509.05	51.42	439	472	510	545
	2006	77917	512.12	51.84	444	474	511	551
	2007	79246	514.17	53.23	444	477	514	549
8	2005	76356	515.56	52.76	448	478	517	553
	2006	78067	518.71	53.21	448	482	520	558
	2007	77849	520.67	56.86	448	481	520	558
HS	2005 (Grade 10)	68788	699.75	50.35	631	667	701	731
	2006 (Cohort 08)	72191	703.19	48.13	635	669	703	737
	2007 (Cohort 09)	74071	703.15	50.25	634	668	703	739
HS	2005 (Grade 11)	18204	669.18	43.55	615	638	667	693
	2006 (Cohort 07)	12232	661.20	36.04	619	635	658	680
	2007 (Cohort 08)	12096	657.88	36.15	613	634	657	679
HS	2005 (Grade 12)	8882	651.91	40.67	606	623	649	677
	2006 (Cohort 06)	6261	663.57	43.13	619	635	658	684
	2007 (Cohort 07)	5505	653.95	35.80	609	630	653	675
								695

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

**Table 8.2.4**  
**Longitudinal Comparison of Performance Level Distribution**  
**Reading CRT**

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77047	10	26	55	10
	2006	78487	9	24	56	11
	2007	79774	7	24	57	12
4	2005	75685	12	24	54	9
	2006	78924	11	24	57	8
	2007	79270	11	24	55	10
5	2005	76379	10	24	58	9
	2006	78157	9	24	58	9
	2007	79821	8	23	63	7
6	2005	75940	12	25	57	7
	2006	78631	10	25	60	4
	2007	78842	9	24	59	7
7	2005	77541	10	25	58	7
	2006	77917	10	25	58	7
	2007	79246	9	24	58	9
8	2005	76356	11	26	57	6
	2006	78067	11	27	58	5
	2007	77849	11	26	56	7
HS	2005 (Grade 10)	68788	8	21	63	8
	2006 (Cohort 08)	72191	6	23	64	8
	2007 (Cohort 09)	74071	8	20	65	7
HS	2005 (Grade 11)	18204	15	39	43	3
	2006 (Cohort 07)	12232	15	53	31	1
	2007 (Cohort 08)	12096	21	48	31	1
HS	2005 (Grade 12)	8882	28	44	28	1
	2006 (Cohort 06)	6261	17	50	30	3
	2007 (Cohort 07)	5505	24	49	26	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

**Table 8.2.5**  
**Longitudinal Comparison of Scale Scores**  
**Writing CRT**

Grade	Year	N	Scale Score		Percentiles			
			M	SD	P10	P25	P50	P75
3	2005	77058	444.76	75.47	358	411	460	496
	2006	79024	423.07	67.32	357	388	436	459
	2007	80027	462.51	78.05	382	428	474	500
4	2005	76049	470.86	76.49	385	435	481	514
	2006	79612	475.48	59.45	414	458	482	515
	2007	79541	494.23	77.85	413	470	503	540
5	2005	76681	502.76	70.74	422	471	509	546
	2006	78769	496.06	67.08	418	467	505	542
	2007	80024	524.19	69.62	446	495	531	571
6	2005	76125	525.89	65.43	445	497	538	563
	2006	79145	563.78	67.33	500	541	579	610
	2007	78909	537.51	70.41	461	513	540	578
7	2005	77537	543.12	61.26	472	512	545	582
	2006	78537	566.06	61.11	497	544	581	605
	2007	79374	564.13	71.95	481	540	578	614
8	2005	76227	548.41	66.65	466	517	558	588
	2006	78641	554.52	59.01	493	529	568	599
	2007	77969	549.73	69.28	455	501	560	590
HS	2005 (Grade 10)	68272	693.41	48.63	630	668	698	723
	2006 (Cohort 08)	71958	684.74	49.39	630	664	689	712
	2007 (Cohort 09)	73812	699.51	47.57	642	676	707	726
HS	2005 (Grade 11)	15977	665.69	51.55	600	636	668	698
	2006 (Cohort 07)	12085	649.32	49.81	591	626	658	680
	2007 (Cohort 08)	11087	657.81	49.33	598	631	666	690
HS	2005 (Grade 12)	7609	649.49	52.88	579	619	657	683
	2006 (Cohort 06)	6133	652.39	55.68	586	626	658	684
	2007 (Cohort 07)	4647	647.27	49.06	587	622	654	680
								701

Note. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

**Table 8.2.6**  
**Longitudinal Comparison of Performance Level Distribution**  
**Writing CRT**

Grade	Year	N	% at Performance Level			
			FFBS	AS	MS	ES
3	2005	77058	6	21	63	10
	2006	79024	7	41	49	3
	2007	80027	6	14	65	16
4	2005	76049	7	31	56	6
	2006	79612	4	30	64	2
	2007	79541	6	15	67	12
5	2005	76681	6	29	63	2
	2006	78769	7	37	56	1
	2007	80024	4	28	63	4
6	2005	76125	4	26	66	3
	2006	79145	3	10	76	11
	2007	78909	5	17	74	5
7	2005	77537	3	18	77	2
	2006	78537	3	8	88	1
	2007	79374	4	14	76	6
8	2005	76227	4	18	77	2
	2006	78641	3	19	78	0
	2007	77969	3	24	71	2
HS	2005 (Grade 10)	68272	5	24	62	9
	2006 (Cohort 08)	71958	6	30	59	6
	2007 (Cohort 09)	73812	4	23	64	9
HS	2005 (Grade 11)	15977	12	43	41	4
	2006 (Cohort 07)	12085	15	57	27	1
	2007 (Cohort 08)	11087	14	51	33	1
HS	2005 (Grade 12)	7609	18	50	30	2
	2006 (Cohort 06)	6133	17	52	28	3
	2007 (Cohort 07)	4647	20	55	24	1

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students without a valid attempt, invalidation, off-grade, a non-standard accommodation, home-schooled students, attending Bureau of Indian Affairs schools, attending juvenile corrections centers (2006 and 2007 only), attending state hospital schools (2006 and 2007 only), and who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. Caution should be used when interpreting results across years, as exclusion rules differ slightly and high school identification of grade versus cohort may result in different student population characteristics.

## Part 9: Validity Evidence

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Part 9 of the technical report provides evidence supporting the reliability and validity of the 2007 AIMS DPA and high school assessments. All data presented in this section were computed using population test data available in the final electronic data files. The following AERA/APA/NCME standards are addressed: 1.5, 1.7, 2.1, 2.4, 2.10, 2.13, 3.16, 4.15, 6.5, 7.1, 7.3, and 7.10.

### 9.1 Reliability

AERA/APA/NCME standards for Educational and Psychological Testing refer to reliability as the “consistency of [a measure] when the testing procedure is repeated on a population of individuals or groups.” A reliable test produces stable scores; that is, very similar score distributions would result if the test were administered repeatedly under similar conditions to the same students without memory or fatigue affecting the scores. Reliability of the 2007 Spring AIMS assessments was estimated in two ways: internal consistency for all multiple-choice tests and reliability of hand scoring for all writing tests.

#### 9.1.1 Measures of Internal Consistency

For tests consisting of constructed response and/or multiple choice items, Cronbach’s alpha is a frequently used measure of internal consistency. Cronbach’s alpha is computed as (Crocker & Algina, 1986)

$$\hat{\alpha} = \frac{k}{k-1} \left( 1 - \frac{\sum \sigma_i^2}{\sigma_x^2} \right),$$

where  $k$  = number of items,  $\sigma_x^2$  = the total score variance, and  $\sigma_i^2$  = the variance of item  $i$ .

Although Cronbach’s alpha could be used as the measure of internal consistency for the 2007 Spring AIMS CRT writing tests, this measure would likely overestimate the coefficient because the trait scores are based on the same response; that is the student response is scored repeatedly for each of the six traits. Furthermore, split-half reliability for a single prompt test may not be a valid estimate of reliability. Therefore, measures of internal consistency for the AIMS writing tests are not reported.

Reliability estimates for the multiple choice tests administered as part of the 2007 Spring AIMS assessment are presented in Table 9.1.1.1. Note that a high degree of internal consistency is evident for all CRT tests. The reliability for the NRT assessment tends to be slightly lower than the corresponding CRT assessment due to the fewer number of items on each test.

**Table 9.1.1.1**  
**2007 Spring AIMS Internal Consistency**

Grade	CRT				NRT			
	Reading		Mathematics		Reading		Language	
	N	Alpha	N	Alpha	N	Alpha	N	Alpha
03	79774	0.90	80072	0.92	79774	0.82	79774	0.83
04	79270	0.92	79500	0.93	79270	0.82	79270	0.85
05	79821	0.92	79991	0.93	79821	0.83	79821	0.77
06	78842	0.91	78793	0.93	78842	0.83	78842	0.79
07	79246	0.91	78944	0.93	79246	0.85	79246	0.85
08	77849	0.90	77527	0.92	77849	0.72	77849	0.81
HS	74071	0.90	71315	0.94	--	--	--	--

### 9.1.2 Reliability of Constructed-Response Scoring

For constructed response items, the consistency with which two raters assign scores to student responses is typically determined by inter rater agreement. During the scoring process, six traits were grouped into two rater-item blocks. Trait 1, 2, and 6 were grouped into one block and trait 3, 4, and 5 were grouped into another block. Traits grouped in the same rater-item block are considered to be measuring similar writing attributes and grouping these traits together facilitates training and the rater qualification process. Raters were assigned to score either the first or the second rater-item block. Since different raters scored different trait sets, the inter rater statistics computed here do not measure the degrees of agreement or disagreements between the same two raters across trait sets. Therefore, it is more accurate to describe the inter rater agreement reported in this section as inter rater position reliability.

For the grades 3-8 writing tests, ten percent of the student responses were randomly selected and scored by a second rater to reduce rater drift and allow measures of rater agreement to be estimated. The statistics provided in Table 9.1.2.1 were calculated using the scores from both raters on each trait for the ten percent of the responses that were scored twice. For the high school writing prompts, each student paper was scored by two independent raters for all students. The statistics for Prompt A and Prompt T are presented in Table 9.1.2.2 and were calculated using the scores from both raters on a given trait. The two trait scores for each trait were used in the analyses to calculate rater agreement.

The raw score means, raw score standard deviations, and percentage of agreement between the first and second rater were computed. Perfect agreement is defined as trait scores that are exactly the same between the first and second rating. Adjacent agreement is defined as trait scores differing by one point between the first and the second rating. Discrepant cases include records in which scores from the first and the second rating differed by more than one point. In addition, Cohen's kappa and intraclass correlation are provided as indices of agreement between the first and the second rating.

Cohen's kappa (Cohen, 1960) is commonly used to summarize the agreement between raters and is computed as (Brennan & Prediger, 1981)

$$\kappa = \frac{\sum P_{ii} - \sum P_i \cdot P_{\cdot i}}{1 - \sum P_i \cdot P_{\cdot i}},$$

where  $\sum P_{ii}$  is the observed proportion of agreement and  $\sum P_i \cdot P_{\cdot i}$  is the chance proportion of agreement.

Intraclass correlation is defined by Shrout and Fleiss (1979) as “the correlation between one measurement on a target and another measurement obtained on that target.” In the context of the 2007 Spring AIMS writing tests, the “target” is the trait, and each measurement was obtained by a randomly assigned rater to that trait. Therefore, ICC(1,1) was used to estimate intraclass correlation. ICC(1,1) is estimated as (Shrout & Fleiss, 1979)

$$ICC(1,1) = \frac{BMS - WMS}{BMS + (k - 1)WMS},$$

where  $BMS$  = between-targets mean square,  $WMS$  = within-targets mean square, and  $k$ =the number of raters rating each target.

**Table 9.1.2.1**  
**2007 Spring AIMS Inter-rater Position Consistency**  
**Grades 3-8**

Trait	N	Max Points	Rater 1		Rater 2		% Agreement			Kappa	Intraclass Correlation
			M	SD	M	SD	Perfect	Adjacent	Discrepant		
<b>Grade 3</b>											
1 Ideas and Content	8037	6	3.66	1.17	3.65	1.17	56.9	38.8	4.31	0.59	0.77
2 Organization	8037	6	3.59	1.17	3.58	1.17	55.37	39.68	4.95	0.57	0.76
3 Voice	8037	6	3.50	1.14	3.49	1.15	55.99	39.68	4.33	0.58	0.76
4 Word Choice	8037	6	3.52	1.12	3.52	1.13	59.05	37.10	3.84	0.59	0.76
5 Sentence Fluency	8037	6	3.45	1.14	3.45	1.14	56.80	38.42	4.78	0.58	0.75
6 Conventions	8037	6	3.42	1.20	3.42	1.20	54.82	39.88	5.30	0.59	0.76
<b>Grade 4</b>											
1 Ideas and Content	7859	6	3.46	1.05	3.47	1.06	60.62	36.04	3.35	0.60	0.76
2 Organization	7859	6	3.40	1.06	3.41	1.06	59.17	37.19	3.64	0.58	0.76
3 Voice	7859	6	3.43	1.07	3.46	1.08	55.96	40.07	3.97	0.56	0.75
4 Word Choice	7859	6	3.42	1.05	3.44	1.06	57.68	38.95	3.37	0.57	0.75
5 Sentence Fluency	7859	6	3.37	1.07	3.40	1.08	56.79	39.55	3.66	0.57	0.75
6 Conventions	7859	6	3.33	1.08	3.33	1.08	58.71	37.75	3.54	0.59	0.77
<b>Grade 5</b>											
1 Ideas and Content	8094	6	3.42	0.99	3.43	0.98	56.75	39.96	3.30	0.54	0.72
2 Organization	8094	6	3.36	0.99	3.36	0.98	57.65	38.89	3.46	0.55	0.72
3 Voice	8094	6	3.45	0.99	3.45	0.99	53.76	41.49	4.76	0.50	0.68
4 Word Choice	8094	6	3.40	0.97	3.40	0.98	55.62	40.64	3.74	0.52	0.70
5 Sentence Fluency	8094	6	3.35	0.98	3.34	0.98	54.52	41.51	3.97	0.51	0.69
6 Conventions	8094	6	3.47	0.99	3.47	0.99	58.10	39.23	2.67	0.56	0.74
<b>Grade 6</b>											
1 Ideas and Content	7874	6	3.12	0.87	3.11	0.86	60.33	37.05	2.63	0.50	0.67
2 Organization	7874	6	3.10	0.90	3.10	0.90	59.96	37.26	2.78	0.52	0.69
3 Voice	7874	6	3.16	0.99	3.15	0.98	55.64	40.74	3.62	0.51	0.70
4 Word Choice	7874	6	3.13	0.96	3.13	0.94	58.95	38.10	2.95	0.53	0.70
5 Sentence Fluency	7874	6	3.13	0.96	3.12	0.95	58.70	38.32	2.98	0.53	0.71
6 Conventions	7874	6	3.38	0.94	3.37	0.94	58.32	38.18	3.51	0.51	0.69
<b>Grade 7</b>											
1 Ideas and Content	8008	6	3.37	0.96	3.37	0.96	57.47	39.30	3.23	0.55	0.71
2 Organization	8008	6	3.35	0.98	3.35	0.98	57.73	39.06	3.21	0.56	0.73
3 Voice	8008	6	3.44	1.00	3.44	0.99	54.78	40.63	4.58	0.52	0.70
4 Word Choice	8008	6	3.44	0.98	3.44	0.98	56.56	39.71	3.73	0.54	0.71
5 Sentence Fluency	8008	6	3.43	0.99	3.42	0.98	54.91	41.11	3.98	0.52	0.70
6 Conventions	8008	6	3.31	0.98	3.30	1.00	54.96	41.32	3.72	0.53	0.71
<b>Grade 8</b>											
1 Ideas and Content	7704	6	3.61	0.95	3.61	0.95	57.07	40.12	2.80	0.53	0.71
2 Organization	7704	6	3.56	0.93	3.56	0.94	60.66	36.89	2.45	0.56	0.73
3 Voice	7704	6	3.54	0.93	3.53	0.93	59.75	37.94	2.31	0.55	0.72
4 Word Choice	7704	6	3.52	0.91	3.52	0.91	61.73	36.14	2.13	0.57	0.73
5 Sentence Fluency	7704	6	3.48	0.93	3.48	0.93	60.66	37.10	2.25	0.57	0.73
6 Conventions	7704	6	3.52	0.94	3.53	0.95	57.52	39.59	2.89	0.52	0.70

Note. Approximately 10% of the student responses were randomly assigned to be rated by a second rater.

**Table 9.1.2.2**  
**2007 Spring AIMS Inter-rater Position Consistency**  
**High School**

Trait	N	Max Points	Rater 1		Rater 2		% Agreement			Kappa	Intraclass Correlation
			M	SD	M	SD	Perfect	Adjacent	Discrepant		
<b>Prompt A</b>											
1 Ideas and Content	71746	6	3.60	0.89	3.60	0.89	57.74	38.89	3.37	0.50	0.66
2 Organization	71746	6	3.59	0.87	3.59	0.86	60.21	36.67	3.12	0.51	0.66
3 Voice	71746	6	3.68	0.90	3.69	0.89	57.58	39.16	3.26	0.49	0.67
4 Word Choice	71746	6	3.66	0.89	3.66	0.89	59.44	37.94	2.62	0.52	0.69
5 Sentence Fluency	71746	6	3.64	0.91	3.64	0.90	59.07	38.10	2.83	0.52	0.69
6 Conventions	71746	6	3.61	0.83	3.61	0.83	60.54	36.81	2.66	0.49	0.65
<b>Prompt T</b>											
1 Ideas and Content	2056	6	3.12	1.02	3.14	1.05	60.12	37.21	2.68	0.60	0.77
2 Organization	2056	6	3.13	1.01	3.15	1.03	63.33	34.39	2.29	0.63	0.78
3 Voice	2056	6	3.32	1.05	3.31	1.05	57.93	39.15	2.92	0.58	0.76
4 Word Choice	2056	6	3.29	1.03	3.29	1.03	59.05	38.96	1.99	0.59	0.77
5 Sentence Fluency	2056	6	3.27	1.04	3.27	1.04	58.95	38.52	2.53	0.59	0.77
6 Conventions	2056	6	3.19	1.02	3.20	1.04	63.28	35.07	1.65	0.64	0.80

*Note.* All student responses were rated by two raters. Only students receiving scores and condition codes of B, C, and D are included in this analysis.

## 9.2 Validity

“Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed users of tests. Validity is, therefore, the most fundamental consideration in developing and evaluating tests” (AERA/APA/NCME, 1999). The purpose of test score validation is not to validate the test itself, but to validate interpretations of the test scores for particular purposes or uses. Test score validation is not a quantifiable property but an ongoing process, beginning at initial conceptualization and continuing throughout the entire assessment process.

The 2007 Spring AIMS tests were designed and developed to provide fair and accurate ability scores that support appropriate, meaningful, and useful educational decisions. In addition to the evidence provided in Part 2 (Involvement of Arizona Educators), Part 3 (Test Design), Part 4 (Test Development), Part 5 (Test Administration), Part 6 (Data for Operational Analysis), Part 7 (Calibration and Scaling), Part 8 (Reliability), and Part 10 (Classification), additional evidence to support the validity of the 2007 AIMS assessments is provided by the following:

- Identification of any items that displayed differential item functioning for subgroups of ethnicity and gender; and
- Correlations between scores on the 2007 AIMS tests for each grade level.

Also note that further evidence in support of the AIMS assessment has been documented in previous AIMS technical reports.

### 9.2.1 Differential Item Functioning

Because test scores can have many sources of variation, the test publishers’ task is to develop assessments that measure the intended abilities and skills without introducing extraneous elements or construct irrelevant variance. When tests measure something other than what they are intended to measure, test scores will reflect these unintended skills and knowledge, as well as what is purportedly assessed by the test. If this occurs, these tests can be called biased (Angoff, 1993;

Camilli & Shepard, 1994; Green, 1975). One of the factors that may render test scores to be biased is differing cultural and socioeconomic experiences.

The 2007 Spring AIMS tests were developed using procedures to minimize item and test bias and include reviews such as the Content and Sensitivity Reviews described in Part 4 (i.e., Test Development). Expertise in this area is not, however, a substitute for statistical analyses of the items. Thus, an empirical differential item functioning (DIF) approach was used to examine potential item bias. DIF studies include systematic item analyses to determine if examinees with the same underlying level of ability have the same probability of correctly responding to the item. Items identified with DIF are further examined to determine if item performance differences between identifiable subgroups of the population are due to extraneous or construct irrelevant information making the items unfairly difficult for one of the subgroups.

DIF analyses of the 2007 Spring AIMS tests were conducted for ethnic subgroups and gender. In order to compute DIF, students must be matched on ability level using a conditioning variable. For these analyses, raw score on the CRT test in the content area of interest was used as the conditioning variable. Note that DIF analyses were conducted on reading and mathematics items only, as the writing single prompt assessments do not have an appropriate conditioning variable for analysis.

The Mantel-Haenszel chi-square statistic was used to identify DIF in multiple choice items. The Mantel-Haenszel statistic was first recommended by Holland and Thayer (1988), is frequently used, and is efficient in terms of statistical power (Clauser & Mazor, 1998). The Mantel-Haenszel statistic is computed as (Zwick, Donoghue, & Grima, 1993)

$$\text{Mantel } \chi^2 = \frac{\left( \sum_k F_k - \sum_k E(F_k) \right)^2}{\sum_k \text{Var}(F_k)},$$

where  $F_k$  is the sum of scores for the focal group at the  $k^{\text{th}}$  level of the matching variable. Note that the Mantel-Haenszel statistic is sensitive to N such that larger sample sizes increase the value of chi square.

In addition to the Mantel-Haenszel chi-square statistic, the delta statistic (MH-D DIF) was computed for all items. Educational Testing Service (ETS) first developed the MH-D DIF statistic. To compute delta, alpha (the odds ratio) is first computed as

$$\alpha_{MH} = \frac{\sum_{k=1}^K N_{r1k} N_{f0k} / N_k}{\sum_{k=1}^K N_{f1k} N_{r0k} / N_k},$$

where  $N_{r1k}$  is the number of correct responses in the reference group at ability level  $k$ ,  $N_{f0k}$  is the number of incorrect responses in the focal group at ability level  $k$ ,  $N_k$  is the total number of responses,  $N_{f1k}$  is the number of correct responses in the focal group at ability level  $k$ , and  $N_{r0k}$  is the number of incorrect responses in the reference group at ability level  $k$ . MH-D DIF is then computed as

$$\text{MH-D DIF} = -2.35 \ln(\alpha_{MH}).$$

Positive values of MH-D DIF indicate items that favor the focal group, whereas negative values of MH-D DIF indicate items that favor the reference group.

The Mantel-Haenszel chi-square statistic and the delta statistic were used in combination to identify the 2007 Spring AIMS items that exhibit strong, weak, or no DIF (Zieky, 1993). Table 9.2.1.1 indicates the criteria for each category used for the 2007 AIMS DIF analysis. An alpha level of .01 was used for all Mantel-Haenszel statistics. Note that the criteria are very lenient given very large sample sizes and the number of DIF statistics computed. In other words, a large number of items will be placed in categories B and C given the critical value. For reference, the critical value for the chi-square statistic to be significant at  $p < 0.01$  is 6.635, at  $p < 0.001$  the critical value is 10.827, and at  $p < 0.0005$  the critical value is 12.116.

**Table 9.2.1.1**  
**Differential Item Functioning Flag Categories**

Category	Description	Criterion
A	No DIF	Mantel-Haenzel chi-square not significantly different than zero
B	Weak DIF	Significant Mantel-Haenzel chi-square ( $p < 0.01$ ) and $ MH\ D\text{-DIF}  < 1.5$
C	Strong DIF	Significant Mantel-Haenzel chi-square ( $p < 0.01$ ) and $ MH\ D\text{-DIF}  \geq 1.5$

Another measure of DIF, also presented here for the 2007 Spring AIMS operational items, is the standardized mean difference (SMD; Zwick et al., 1993). The SMD is an effect size index of DIF which is relatively easy to interpret. The SMD compares the means of the reference and focus groups, adjusting for the distribution of reference and focal group members on the conditioning variable, which for these analyses is the CRT raw score. SMD is computed as (Zwick et al., 1993)

$$SMD = p_{Fk} \left( \sum_k m_{Fk} - \sum_k m_{Rk} \right),$$

where  $p_{jk}$ = proportion of the focal group members at the  $k$ th level of the matching variable,  $m_{Fk}=1/N_{F1k}$  and  $m_{Rk}=1/N_{R1k}$ . A negative SMD value indicates an item on which the focal group has a lower mean than the reference group. A positive SMD value indicates an item on which the reference group has a lower mean than the focal group.

Mantel-Haenszel chi-square statistic, MH-D DIF, SMD, and flag category results for all items in the 2007 Spring AIMS CRT tests are presented in tables 9.2.1.2 through 9.2.1.15. It is important to note that DIF analyses are also conducted on field test items prior to form construction. Very few AIMS items are identified as exhibiting strong DIF in field testing. All items exhibiting strong DIF are investigated for possible sources of differential functioning by CTB Test Development and ADE staff and such items are avoided in form construction. Not surprisingly, the vast majority of items on the operational AIMS exhibit no DIF or weak DIF. Items that were flagged for exhibiting strong DIF are summarized in Table 9.2.1.16. There were a total of 11 items that were flagged as exhibiting strong DIF.

**Table 9.2.1.2**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3**

Item	Reference: Male N = 41416 Focal: Female N = 39579				Reference: White N = 34957 Focal: African Am. N = 4525				Reference: White N = 34957 Focal: Hispanic N = 35232				Reference: White N = 34957 Focal: Native Am. N = 4095				Reference: White N = 34957 Focal: Asian N = 2260			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	296.72	0.72	0.05	B>	6.00	0.22	0.02	A	251.99	0.75	0.06	B>	16.88	0.39	0.03	B>	21.76	0.70	0.04
2	0.46	0.03	0.00	A	0.68	-0.09	-0.01	A	1.18	0.06	0.00	A	54.33	-0.75	-0.05	B<	3.54	-0.32	-0.01	A
3	6.68	-0.14	-0.01	B<	14.49	0.46	0.02	B>	2.67	0.10	0.00	A	19.25	0.53	0.03	B>	5.39	0.52	0.01	A
4	52.54	0.30	0.02	B>	0.40	-0.06	-0.01	A	60.57	0.37	0.02	B>	0.90	0.09	0.00	A	0.03	0.03	0.00	A
5	129.00	-0.61	-0.02	B<	1.15	0.12	0.01	A	15.46	0.24	0.01	B>	0.74	0.10	0.00	A	1.11	0.23	0.01	A
6	25.66	0.19	0.02	B>	17.97	0.36	0.03	B>	26.57	0.22	0.02	B>	31.42	0.50	0.04	B>	11.61	0.45	0.03	B>
7	9.99	0.53	0.00	B>	1.17	-0.37	0.00	A	3.37	0.37	0.00	A	7.43	1.12	0.01	B>	0.01	-0.02	0.00	A
8	1.60	0.05	0.00	A	6.37	0.22	0.02	A	46.75	0.30	0.02	B>	1.49	0.11	0.01	A	1.52	0.16	0.01	A
9	13.40	-0.16	-0.01	B<	10.92	0.32	0.02	B>	27.02	-0.25	-0.02	B<	0.54	0.07	0.00	A	9.65	0.51	0.02	B>
10	15.49	-0.15	-0.01	B<	7.96	-0.24	-0.02	B<	162.50	-0.55	-0.05	B<	26.37	-0.47	-0.04	B<	0.09	-0.04	0.00	A
11	37.41	-0.25	-0.02	B<	0.01	-0.01	0.00	A	8.61	0.14	0.00	B>	24.58	0.47	0.04	B>	20.49	0.69	0.04	B>
12	0.53	0.03	0.00	A	0.00	-0.01	0.00	A	57.61	-0.32	-0.03	B<	46.50	-0.59	-0.06	B<	6.88	-0.33	-0.02	B<
13	1.45	0.05	0.00	A	23.81	0.47	0.03	B>	77.93	0.43	0.03	B>	5.38	0.23	0.02	A	43.17	1.11	0.05	B>
14	23.81	-0.21	-0.01	B<	44.28	-0.62	-0.04	B<	262.09	-0.80	-0.05	B<	49.73	-0.67	-0.05	B<	31.93	-0.85	-0.04	B<
15	35.83	-0.21	-0.02	B<	16.43	-0.33	-0.03	B<	213.38	-0.58	-0.05	B<	116.07	-0.94	-0.08	B<	33.43	-0.65	-0.06	B<
16	39.02	-0.31	-0.01	B<	3.56	0.20	0.01	A	74.46	0.49	0.03	B>	11.80	0.38	0.02	B>	11.46	0.64	0.02	B>
17	29.46	0.45	0.01	B>	2.46	0.29	0.01	A	5.39	0.23	0.00	A	0.00	-0.01	0.00	A	0.40	-0.23	0.00	A
18	146.62	0.60	0.03	B>	1.00	0.11	0.01	A	134.82	0.65	0.04	B>	14.36	0.41	0.03	B>	15.34	0.73	0.03	B>
19	46.90	-0.30	-0.02	B<	0.00	-0.01	0.00	A	0.78	-0.04	0.00	A	6.56	-0.25	-0.02	A	0.39	0.11	0.00	A
20	266.50	-0.63	-0.05	B<	80.00	-0.77	-0.06	B<	9.28	-0.13	-0.01	B<	10.85	0.30	0.03	B>	0.86	-0.12	-0.01	A
21	516.31	-1.00	-0.06	B<	138.54	-1.13	-0.08	B<	756.65	-1.31	-0.10	B<	249.99	-1.61	-0.11	C<	55.23	-1.07	-0.06	B<
22	16.20	-0.20	-0.01	B<	0.03	0.02	0.00	A	0.18	-0.02	0.00	A	0.19	-0.05	0.00	A	5.66	-0.45	-0.01	A
23	38.51	0.23	0.02	B>	0.00	0.01	0.00	A	50.75	0.31	0.02	B>	22.08	0.42	0.04	B>	0.12	0.05	0.00	A
24	4.11	-0.08	-0.01	A	0.06	-0.02	0.00	A	187.97	-0.60	-0.04	B<	23.63	-0.43	-0.03	B<	18.10	-0.56	-0.03	B<
25	15.65	-0.19	-0.01	B<	41.61	-0.64	-0.04	B<	35.44	-0.33	-0.03	B<	56.95	-0.77	-0.06	B<	19.64	-0.74	-0.03	B<
26	14.84	0.22	0.01	B>	0.00	-0.01	0.00	A	0.93	-0.06	-0.01	A	3.87	0.25	0.01	A	0.16	-0.10	0.00	A
27	0.61	-0.06	0.00	A	4.36	0.35	0.01	A	3.92	0.18	0.00	A	7.82	0.47	0.01	B>	0.55	0.26	0.00	A
28	12.17	0.16	0.01	B>	0.25	0.05	0.01	A	51.45	0.39	0.02	B>	15.50	0.42	0.03	B>	2.29	-0.24	-0.01	A
29	7.59	0.10	0.01	B>	9.77	0.26	0.02	B>	8.40	0.12	0.01	B>	4.91	0.19	0.02	A	3.15	0.22	0.02	A
30	106.67	0.37	0.03	B>	0.03	-0.02	0.00	A	43.00	-0.26	-0.02	B<	21.52	-0.40	-0.04	B<	9.07	-0.36	-0.03	B<

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.2 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3**

Item	Reference: Male N = 41416 Focal: Female N = 39579				Reference: White N = 34957 Focal: African Am. N = 4525				Reference: White N = 34957 Focal: Hispanic N = 35232				Reference: White N = 34957 Focal: Native Am. N = 4095				Reference: White N = 34957 Focal: Asian N = 2260			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	20.11	0.21	0.01	B>	6.95	0.27	0.02	B>	81.02	0.49	0.03	B>	27.43	0.57	0.04	B>	4.50	0.37	0.01
32	22.82	-0.17	-0.02	B<	57.74	-0.67	-0.06	B<	0.73	-0.04	-0.01	A	0.35	0.06	0.00	A	8.79	-0.34	-0.03	B<
33	0.26	-0.03	0.00	A	0.37	-0.07	0.00	A	0.00	0.00	0.00	A	6.11	-0.26	-0.01	A	0.51	-0.14	0.00	A
34	145.77	-0.48	-0.04	B<	43.06	0.59	0.05	B>	38.41	0.28	0.02	B>	14.10	0.34	0.03	B>	23.88	0.70	0.04	B>
35	0.25	-0.02	0.00	A	0.00	0.00	0.00	A	20.98	0.22	0.01	B>	18.69	0.42	0.03	B>	12.49	0.56	0.03	B>
36	104.92	0.43	0.03	B>	0.52	-0.07	0.00	A	37.09	-0.29	-0.02	B<	12.76	-0.33	-0.02	B<	8.52	-0.43	-0.02	B<
37	4.44	-0.08	-0.01	A	1.01	-0.09	-0.01	A	53.23	-0.33	-0.02	B<	10.62	-0.30	-0.02	B<	0.01	0.02	0.00	A
38	44.12	-0.29	-0.02	B<	0.02	-0.01	0.00	A	24.79	0.25	0.02	B>	93.95	0.99	0.07	B>	7.64	0.46	0.02	B>
39	64.76	0.28	0.03	B>	11.70	0.28	0.03	B>	40.35	0.25	0.03	B>	17.43	0.35	0.03	B>	12.38	0.40	0.04	B>
40	101.35	0.37	0.03	B>	2.06	-0.12	-0.01	A	0.00	0.00	0.00	A	42.14	-0.60	-0.05	B<	2.37	0.19	0.01	A
41	275.57	-0.63	-0.05	B<	23.52	-0.42	-0.03	B<	288.23	-0.71	-0.05	B<	61.01	-0.72	-0.06	B<	17.79	-0.51	-0.04	B<
42	4.92	-0.13	0.00	A	3.63	0.24	0.01	A	23.01	0.33	0.01	B>	16.65	0.52	0.02	B>	7.03	0.66	0.01	B>
43	66.22	0.35	0.02	B>	37.56	0.59	0.04	B>	218.99	0.73	0.05	B>	144.15	1.18	0.10	B>	20.51	0.74	0.03	B>
44	1191.78	-1.27	-0.11	B<	116.86	-0.90	-0.08	B<	358.14	-0.77	-0.07	B<	0.54	-0.07	-0.01	A	13.33	-0.43	-0.03	B<
45	73.37	0.43	0.02	B>	15.31	0.43	0.02	B>	90.03	0.54	0.03	B>	58.58	0.90	0.05	B>	0.73	-0.15	-0.01	A
46	2.03	0.08	0.00	A	21.46	0.54	0.03	B>	26.48	0.31	0.02	B>	52.98	0.85	0.05	B>	4.11	0.41	0.01	A
47	334.19	0.80	0.05	B>	11.04	0.33	0.02	B>	22.66	-0.24	-0.01	B<	0.45	-0.07	0.00	A	3.92	-0.32	-0.01	A
48	10.75	-0.20	-0.01	B<	10.92	0.42	0.02	B>	143.90	0.84	0.03	B>	22.06	0.62	0.03	B>	3.30	0.45	0.01	A
49	14.71	-0.14	-0.01	B<	21.32	0.39	0.03	B>	83.06	0.38	0.03	B>	18.61	0.39	0.03	B>	11.05	0.41	0.03	B>
50	11.31	0.12	0.01	B>	5.61	-0.19	-0.02	A	6.19	0.10	0.01	A	16.80	-0.35	-0.04	B<	2.17	0.19	0.01	A
51	11.11	0.18	0.01	B>	0.14	0.04	0.00	A	131.18	0.69	0.03	B>	18.31	0.52	0.03	B>	0.05	0.05	0.00	A
52	214.51	0.57	0.04	B>	5.96	0.22	0.02	A	52.38	-0.32	-0.02	B<	30.37	-0.48	-0.04	B<	4.05	-0.27	-0.02	A
53	4.77	-0.08	-0.01	A	14.55	-0.32	-0.03	B<	18.66	-0.18	-0.02	B<	3.46	-0.16	-0.01	A	6.34	-0.29	-0.02	A
54	115.98	-0.43	-0.03	B<	46.33	0.62	0.05	B>	17.22	0.19	0.01	B>	0.71	0.08	0.00	A	18.69	0.62	0.04	B>
55	484.75	0.90	0.06	B>	0.84	0.08	0.01	A	242.34	0.73	0.05	B>	88.56	0.90	0.07	B>	6.51	0.37	0.02	A
56	135.90	-0.46	-0.03	B<	12.07	-0.31	-0.02	B<	7.18	-0.12	-0.01	B<	5.20	0.21	0.02	A	0.48	-0.09	-0.01	A
57	4.09	-0.10	0.00	A	7.28	0.29	0.02	B>	9.53	0.18	0.01	B>	37.93	-0.64	-0.04	B<	10.18	0.63	0.02	B>
58	14.69	0.14	0.01	B>	69.51	0.71	0.06	B>	75.66	0.37	0.03	B>	12.63	0.31	0.03	B>	45.57	0.88	0.06	B>
59	117.65	0.56	0.02	B>	35.06	0.68	0.04	B>	41.01	0.38	0.02	B>	20.55	0.51	0.03	B>	20.56	0.97	0.03	B>
60	303.62	-0.81	-0.04	B<	3.78	-0.20	-0.01	A	0.20	0.02	0.00	A	0.04	-0.02	0.00	A	17.97	-0.69	-0.03	B<

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD=Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.2 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 3**

Reference: Male N = 41416 Focal: Female N = 39579				Reference: White N = 34957 Focal: African Am. N = 4525				Reference: White N = 34957 Focal: Hispanic N = 35232				Reference: White N = 34957 Focal: Native Am. N = 4095				Reference: White N = 34957 Focal: Asian N = 2260				
Item	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag				
61	149.29	-0.50	-0.04	B<	49.23	-0.63	-0.05	B<	314.90	-0.81	-0.06	B<	20.52	-0.41	-0.04	B<	14.92	-0.56	-0.03	B<
62	42.98	-0.25	-0.02	B<	8.86	-0.26	-0.02	B<	153.54	-0.53	-0.04	B<	130.33	-1.01	-0.09	B<	20.61	-0.58	-0.04	B<
63	73.04	-0.32	-0.03	B<	1.15	0.09	0.01	A	24.74	-0.21	-0.02	B<	0.90	-0.09	-0.01	A	12.42	-0.42	-0.03	B<
64	99.53	0.57	0.02	B>	3.90	0.24	0.01	A	10.93	0.22	0.01	B>	12.76	0.44	0.02	B>	1.26	-0.25	-0.01	A
65	14.47	0.17	0.01	B>	19.13	-0.43	-0.03	B<	25.81	-0.27	-0.02	B<	18.68	-0.43	-0.03	B<	5.41	-0.39	-0.02	A
66	11.84	0.13	0.01	B>	21.32	-0.38	-0.03	B<	35.59	-0.24	-0.02	B<	48.96	-0.63	-0.06	B<	10.11	-0.37	-0.03	B<
67	16.90	0.15	0.01	B>	9.83	0.27	0.02	B>	0.41	-0.03	0.00	A	4.20	-0.19	-0.01	A	0.32	0.07	0.01	A
68	11.46	0.14	0.01	B>	0.13	-0.03	0.00	A	4.06	0.09	0.00	A	3.80	-0.18	-0.02	A	0.26	-0.07	0.00	A
69	101.63	0.42	0.03	B>	2.05	0.13	0.01	A	86.30	0.44	0.03	B>	0.00	0.00	0.00	A	0.18	0.06	0.00	A
70	77.39	-0.38	-0.02	B<	30.22	-0.52	-0.04	B<	98.58	-0.49	-0.04	B<	6.16	-0.24	-0.02	A	22.77	-0.72	-0.03	B<
71	216.09	0.55	0.05	B>	17.36	0.36	0.03	B>	215.28	0.62	0.05	B>	151.18	1.11	0.09	B>	4.28	0.24	0.02	A
72	300.32	0.61	0.06	B>	0.19	0.04	0.00	A	11.07	0.13	0.01	B>	1.92	-0.12	-0.01	A	0.31	-0.06	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.3**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4**

Item	Reference: Male N = 41175 Focal: Female N = 39256				Reference: White N = 35105 Focal: African Am. N = 4339				Reference: White N = 35105 Focal: Hispanic N = 34887				Reference: White N = 35105 Focal: Native Am. N = 3964				Reference: White N = 35105 Focal: Asian N = 2190			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	204.44	-0.65	-0.04	B<	18.11	-0.42	-0.03	B<	3.84	-0.10	-0.01	A	85.95	-0.92	-0.07	B<	1.08	-0.18	-0.01
2	70.38	-0.34	-0.02	B<	0.03	0.02	0.00	A	183.70	-0.62	-0.05	B<	56.63	-0.69	-0.06	B<	20.16	-0.59	-0.04	B<
3	9.45	0.18	0.01	B>	4.17	-0.26	-0.01	A	7.20	-0.19	-0.01	B<	19.25	-0.55	-0.03	B<	4.14	-0.44	-0.01	A
4	20.91	0.22	0.01	B>	4.70	0.23	0.02	A	86.43	0.51	0.03	B>	5.35	0.25	0.01	A	14.69	0.77	0.02	B>
5	92.42	0.36	0.03	B>	0.06	0.02	0.00	A	17.36	-0.18	-0.02	B<	8.70	-0.26	-0.03	B<	2.99	-0.22	-0.02	A
6	14.58	0.21	0.01	B>	19.19	0.53	0.03	B>	153.46	0.78	0.04	B>	30.98	0.67	0.04	B>	12.76	0.82	0.02	B>
7	25.06	-0.20	-0.02	B<	0.07	-0.03	0.00	A	44.30	-0.29	-0.02	B<	17.26	-0.38	-0.03	B<	0.22	0.07	0.00	A
8	86.70	-0.50	-0.02	B<	2.35	0.18	0.01	A	61.17	0.48	0.02	B>	4.01	0.23	0.01	A	12.04	0.77	0.02	B>
9	256.07	0.61	0.05	B>	0.32	0.05	0.00	A	32.22	0.24	0.02	B>	12.83	-0.33	-0.03	B<	0.09	0.04	0.00	A
10	663.70	1.36	0.06	B>	0.97	0.12	0.01	A	38.29	-0.38	-0.02	B<	16.66	-0.44	-0.03	B<	12.46	-0.75	-0.02	B<
11	25.43	-0.29	-0.01	B<	6.51	-0.33	-0.01	A	94.81	-0.68	-0.03	B<	34.76	-0.73	-0.04	B<	19.86	-1.03	-0.02	B<
12	304.56	0.72	0.05	B>	56.47	0.71	0.05	B>	341.48	0.87	0.06	B>	56.60	0.73	0.06	B>	64.75	1.33	0.06	B>
13	56.06	0.30	0.02	B>	17.74	0.39	0.03	B>	7.79	0.13	0.01	B>	3.10	-0.16	-0.01	A	3.22	0.27	0.01	A
14	0.63	0.04	0.00	A	2.26	0.17	0.01	A	15.77	0.24	0.01	B>	5.96	0.28	0.02	A	6.15	0.55	0.01	A
15	100.55	-0.38	-0.03	B<	0.58	-0.07	-0.01	A	10.34	-0.14	-0.02	B<	20.72	-0.41	-0.04	B<	2.06	-0.19	-0.01	A
16	16.72	-0.22	-0.01	B<	4.48	-0.25	-0.01	A	104.44	-0.65	-0.03	B<	109.37	-1.18	-0.07	B<	3.39	-0.42	-0.01	A
17	0.10	0.01	0.00	A	22.46	0.41	0.03	B>	55.80	-0.31	-0.03	B<	7.05	0.24	0.02	B>	1.23	0.15	0.01	A
18	9.83	0.17	0.01	B>	0.45	0.08	0.00	A	2.75	0.10	0.01	A	4.26	0.25	0.01	A	1.03	0.22	0.01	A
19	17.84	0.16	0.01	B>	16.19	-0.35	-0.03	B<	392.22	-0.84	-0.07	B<	202.88	-1.25	-0.11	B<	107.32	-1.30	-0.09	B<
20	0.49	-0.03	0.00	A	5.48	0.20	0.02	A	16.84	0.17	0.01	B>	0.53	0.07	0.00	A	4.30	0.26	0.02	A
21	0.00	0.00	0.00	A	1.00	0.10	0.01	A	2.07	0.07	0.01	A	27.60	0.50	0.04	B>	26.03	0.82	0.04	B>
22	0.02	0.00	0.00	A	0.85	-0.08	-0.01	A	47.38	-0.27	-0.02	B<	1.18	-0.09	-0.01	A	27.40	-0.60	-0.05	B<
23	125.94	0.42	0.04	B>	44.69	-0.59	-0.05	B<	22.73	-0.20	-0.02	B<	10.38	-0.30	-0.02	B<	42.92	-0.79	-0.06	B<
24	26.27	-0.22	-0.01	B<	0.66	0.08	0.00	A	100.36	0.48	0.03	B>	89.54	1.00	0.07	B>	5.08	0.35	0.02	A
25	64.81	-0.34	-0.02	B<	45.35	-0.62	-0.04	B<	31.36	-0.27	-0.02	B<	9.53	-0.30	-0.02	B<	15.26	-0.57	-0.03	B<
26	0.21	0.02	0.00	A	0.05	0.03	0.00	A	84.53	0.53	0.03	B>	15.89	0.45	0.03	B>	0.11	0.07	0.00	A
27	21.93	-0.21	-0.01	B<	0.00	0.00	0.00	A	25.20	0.26	0.01	B>	4.71	0.23	0.01	A	2.30	0.25	0.01	A
28	2.54	-0.07	0.00	A	12.66	0.37	0.02	B>	2.03	0.08	0.01	A	0.89	0.10	0.01	A	2.44	0.30	0.01	A
29	3.42	0.08	0.01	A	4.04	-0.19	-0.01	A	136.90	-0.54	-0.04	B<	156.94	-1.23	-0.09	B<	0.80	0.14	0.01	A
30	354.34	1.10	0.04	B>	0.01	-0.02	0.00	A	3.22	-0.12	-0.01	A	4.96	-0.27	-0.01	A	0.03	-0.05	0.00	A

Note. African Am. = African American, Native Am. = Native American, MH  $\chi^2$  = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.3 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4**

Item	Reference: Male N = 41175 Focal: Female N = 39256				Reference: White N = 35105 Focal: African Am. N = 4339				Reference: White N = 35105 Focal: Hispanic N = 34887				Reference: White N = 35105 Focal: Native Am. N = 3964				Reference: White N = 35105 Focal: Asian N = 2190			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	98.78	-0.49	-0.02	B<	2.54	-0.17	-0.01	A	53.51	-0.41	-0.03	B<	37.45	-0.65	-0.04	B<	5.85	-0.47	-0.01
32	156.85	-0.56	-0.03	B<	1.09	-0.10	-0.01	A	4.27	0.11	0.01	A	63.33	0.81	0.06	B>	27.47	0.99	0.03	B>
33	0.97	0.05	0.00	A	7.23	-0.30	-0.02	B<	40.03	-0.36	-0.03	B<	1.94	-0.16	-0.01	A	2.89	-0.33	-0.01	A
34	8.86	0.14	0.01	B>	1.66	-0.13	-0.01	A	0.29	0.03	0.00	A	0.62	0.09	0.00	A	0.34	-0.11	0.00	A
35	32.60	0.31	0.01	B>	0.01	-0.02	0.00	A	61.63	0.50	0.02	B>	57.00	1.00	0.05	B>	4.92	0.47	0.01	A
36	33.99	0.44	0.01	B>	3.97	-0.31	-0.01	A	15.34	0.35	0.01	B>	32.29	1.00	0.03	B>	1.03	-0.32	0.00	A
37	23.64	0.26	0.01	B>	0.90	0.11	0.01	A	0.86	0.06	0.00	A	37.25	0.73	0.04	B>	0.28	0.12	0.00	A
38	169.20	-0.52	-0.04	B<	0.20	-0.04	0.00	A	0.82	-0.04	0.00	A	2.30	-0.14	-0.01	A	2.88	0.26	0.01	A
39	76.99	0.52	0.02	B>	0.15	-0.05	0.00	A	11.90	-0.24	-0.01	B<	2.70	0.22	0.01	A	0.99	-0.24	0.00	A
40	118.62	-0.39	-0.04	B<	5.50	0.20	0.02	A	71.02	0.34	0.03	B>	25.01	0.44	0.04	B>	0.00	0.00	0.00	A
41	457.61	-0.77	-0.07	B<	2.34	0.13	0.01	A	4.29	-0.08	-0.01	A	0.25	0.05	0.00	A	0.50	-0.08	-0.01	A
42	19.02	0.20	0.01	B>	1.29	-0.12	-0.01	A	1.26	-0.06	0.00	A	17.17	-0.42	-0.03	B<	11.03	-0.52	-0.02	B<
43	34.88	0.24	0.02	B>	1.64	-0.12	-0.01	A	19.47	0.20	0.01	B>	0.14	-0.04	-0.01	A	6.94	0.40	0.02	B>
44	79.66	-0.39	-0.02	B<	54.26	0.74	0.05	B>	141.68	0.58	0.04	B>	8.08	0.29	0.02	B>	20.47	0.74	0.03	B>
45	85.50	0.38	0.03	B>	0.04	-0.02	0.00	A	52.25	0.33	0.02	B>	3.21	-0.17	-0.01	A	3.87	0.29	0.02	A
46	0.00	0.00	0.00	A	10.40	0.31	0.02	B>	0.97	-0.05	0.00	A	32.71	0.55	0.05	B>	0.00	0.01	0.00	A
47	262.23	0.61	0.05	B>	20.38	-0.39	-0.03	B<	24.97	-0.21	-0.02	B<	2.43	-0.14	-0.01	A	24.83	-0.62	-0.05	B<
48	100.65	-0.43	-0.03	B<	0.98	0.10	0.01	A	4.52	-0.10	-0.01	A	1.31	-0.11	-0.01	A	1.15	0.17	0.01	A
49	64.04	0.35	0.02	B>	3.21	-0.17	-0.01	A	0.07	-0.01	0.00	A	0.00	0.01	0.00	A	1.11	0.17	0.01	A
50	84.96	0.36	0.03	B>	3.15	0.16	0.01	A	144.46	0.53	0.04	B>	13.14	0.33	0.03	B>	3.66	0.26	0.02	A
51	23.25	-0.20	-0.01	B<	12.13	-0.33	-0.02	B<	7.03	-0.13	-0.01	B<	1.12	0.10	0.01	A	7.78	-0.41	-0.02	B<
52	0.16	0.02	0.00	A	2.39	0.17	0.01	A	104.18	0.59	0.04	B>	24.14	0.55	0.04	B>	7.85	0.58	0.02	B>
53	307.97	0.74	0.05	B>	61.12	0.75	0.06	B>	256.64	0.76	0.06	B>	58.35	0.74	0.06	B>	42.03	1.07	0.05	B>
54	158.61	-0.65	-0.03	B<	44.37	-0.75	-0.04	B<	220.99	-0.88	-0.05	B<	48.75	-0.79	-0.05	B<	33.31	-1.20	-0.03	B<
55	9.29	0.16	0.01	B>	1.77	-0.15	-0.01	A	9.50	-0.19	-0.01	B<	7.46	0.33	0.02	B>	1.10	-0.23	-0.01	A
56	68.02	0.37	0.02	B>	40.07	0.63	0.04	B>	118.28	0.55	0.04	B>	13.49	0.37	0.03	B>	21.22	0.83	0.03	B>
57	178.74	-0.64	-0.03	B<	0.37	0.07	0.00	A	21.27	-0.25	-0.01	B<	62.80	-0.81	-0.06	B<	0.01	0.03	0.00	A
58	99.08	0.40	0.03	B>	0.43	-0.06	0.00	A	57.99	-0.34	-0.03	B<	31.05	-0.52	-0.04	B<	8.84	-0.41	-0.02	B<
59	46.45	-0.28	-0.02	B<	11.86	0.32	0.02	B>	39.36	0.29	0.02	B>	9.97	0.30	0.02	B>	0.73	0.13	0.01	A
60	34.06	-0.21	-0.02	B<	10.78	-0.28	-0.02	B<	25.60	-0.20	-0.02	B<	1.75	-0.12	-0.01	A	0.16	-0.05	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.3 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 4**

Item	Reference: Male N = 41175 Focal: Female N = 39256				Reference: White N = 35105 Focal: African Am. N = 4339				Reference: White N = 35105 Focal: Hispanic N = 34887				Reference: White N = 35105 Focal: Native Am. N = 3964				Reference: White N = 35105 Focal: Asian N = 2190			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	61	363.54	-0.80	-0.06	B<	4.12	-0.19	-0.01	A	0.14	-0.02	0.00	A	78.24	0.87	0.07	B>	2.77	0.27	0.01
62	61.15	0.48	0.02	B>	0.00	0.01	0.00	A	11.03	0.23	0.01	B>	6.13	0.33	0.01	A	9.75	-0.69	-0.02	B<
63	53.44	-0.29	-0.02	B<	4.87	0.21	0.02	A	44.35	0.30	0.02	B>	9.71	0.30	0.02	B>	25.92	0.75	0.04	B>
64	48.76	0.31	0.02	B>	5.47	-0.24	-0.02	A	66.65	-0.42	-0.03	B<	1.33	-0.12	-0.01	A	2.27	-0.25	-0.01	A
65	170.96	0.50	0.04	B>	0.93	0.08	0.01	A	33.94	-0.25	-0.02	B<	0.90	-0.09	0.00	A	7.18	-0.35	-0.02	B<
66	0.00	0.00	0.00	A	5.11	-0.20	-0.02	A	42.84	0.28	0.03	B>	2.53	0.14	0.01	A	0.50	0.10	0.01	A
67	116.49	0.67	0.02	B>	0.72	-0.11	-0.01	A	6.16	0.18	0.01	A	13.30	0.50	0.02	B>	1.77	-0.34	-0.01	A
68	389.66	-0.69	-0.07	B<	68.66	-0.66	-0.06	B<	249.56	-0.62	-0.06	B<	1.05	-0.09	-0.01	A	28.73	-0.59	-0.05	B<
69	10.20	0.13	0.01	B>	3.38	0.17	0.01	A	50.23	0.32	0.03	B>	11.53	0.31	0.03	B>	18.72	0.66	0.03	B>
70	304.45	-0.66	-0.05	B<	0.20	0.04	0.00	A	0.33	0.02	0.00	A	0.15	-0.04	0.00	A	3.09	0.22	0.02	A

Note. African Am. = African American, Native Am. = Native American, MH  $\chi^2$  = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.4**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5**

Item	Reference: Male N = 41142 Focal: Female N = 39800				Reference: White N = 36148 Focal: African Am. N = 4424				Reference: White N = 36148 Focal: Hispanic N = 34027				Reference: White N = 36148 Focal: Native Am. N = 4152				Reference: White N = 36148 Focal: Asian N = 2225			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	175.10	-0.51	-0.04	B<	46.77	-0.59	-0.05	B<	444.21	-0.91	-0.08	B<	47.50	-0.61	-0.05	B<	32.04	-0.73	-0.05
2	63.79	0.29	0.03	B>	2.65	-0.13	-0.01	A	427.01	0.85	0.08	B>	302.25	1.54	0.14	C>	36.33	0.77	0.06	B>
3	506.81	-0.83	-0.07	B<	52.76	-0.60	-0.06	B<	30.04	-0.23	-0.02	B<	0.04	0.02	0.00	A	0.27	-0.07	-0.01	A
4	183.46	0.71	0.03	B>	0.22	0.06	0.00	A	34.06	-0.35	-0.02	B<	1.60	-0.14	-0.01	A	4.29	-0.42	-0.01	A
5	128.85	-0.51	-0.03	B<	2.01	-0.14	-0.01	A	135.00	-0.60	-0.04	B<	24.40	-0.50	-0.04	B<	10.84	-0.55	-0.02	B<
6	274.05	0.96	0.03	B>	0.24	-0.06	0.00	A	48.05	-0.46	-0.02	B<	24.24	-0.59	-0.03	B<	0.93	-0.24	0.00	A
7	31.73	0.22	0.02	B>	115.59	-0.92	-0.07	B<	86.32	-0.41	-0.03	B<	41.45	-0.58	-0.05	B<	52.45	-0.97	-0.06	B<
8	22.59	0.24	0.01	B>	5.59	-0.26	-0.01	A	0.59	-0.05	0.00	A	44.48	0.81	0.04	B>	0.16	0.09	0.00	A
9	301.35	0.73	0.05	B>	25.60	0.47	0.04	B>	129.57	0.54	0.04	B>	12.03	0.32	0.03	B>	6.41	0.41	0.02	A
10	43.56	0.26	0.02	B>	8.57	0.26	0.02	B>	105.34	0.46	0.04	B>	7.75	0.25	0.02	B>	10.80	0.46	0.03	B>
11	0.09	0.01	0.00	A	0.00	-0.01	0.00	A	15.68	0.21	0.02	B>	17.47	0.44	0.03	B>	2.18	-0.25	-0.01	A
12	0.56	0.03	0.00	A	1.05	-0.10	-0.01	A	6.89	0.13	0.01	B>	16.29	0.40	0.03	B>	0.00	0.00	0.00	A
13	22.23	0.22	0.01	B>	0.64	-0.08	-0.01	A	34.59	-0.31	-0.02	B<	0.44	-0.07	0.00	A	1.76	-0.24	-0.01	A
14	12.36	0.14	0.01	B>	47.92	0.61	0.05	B>	121.31	0.48	0.04	B>	30.21	0.49	0.04	B>	14.69	0.53	0.03	B>
15	161.14	0.50	0.04	B>	6.00	0.22	0.02	A	104.32	0.45	0.04	B>	20.70	0.42	0.03	B>	2.37	0.21	0.01	A
16	15.09	0.17	0.01	B>	3.79	-0.19	-0.01	A	19.26	-0.22	-0.02	B<	73.18	-0.83	-0.06	B<	2.21	-0.25	-0.01	A
17	3.59	0.11	0.00	A	11.06	0.42	0.02	B>	163.47	0.88	0.04	B>	44.50	0.84	0.04	B>	12.66	0.96	0.02	B>
18	234.82	0.65	0.04	B>	6.95	0.25	0.02	B>	212.01	0.70	0.05	B>	31.18	0.53	0.04	B>	9.74	0.49	0.02	B>
19	5.96	0.09	0.01	A	4.83	-0.19	-0.02	A	6.59	0.11	0.01	A	0.03	-0.02	0.00	A	3.88	0.26	0.02	A
20	89.96	0.37	0.03	B>	2.04	-0.12	-0.01	A	6.43	0.11	0.01	A	8.11	0.25	0.02	B>	0.37	-0.09	-0.01	A
21	0.26	-0.02	0.00	A	0.03	0.02	0.00	A	19.49	0.21	0.01	B>	8.23	0.27	0.02	B>	0.08	0.05	0.00	A
22	0.52	-0.04	0.00	A	2.94	-0.19	-0.01	A	13.76	-0.22	-0.01	B<	19.82	-0.49	-0.03	B<	0.29	-0.12	0.00	A
23	14.07	-0.16	-0.01	B<	0.22	0.05	0.00	A	266.29	-0.79	-0.06	B<	6.46	0.26	0.02	A	2.32	-0.25	-0.01	A
24	13.60	0.17	0.01	B>	2.12	-0.15	-0.01	A	31.97	-0.30	-0.02	B<	133.53	-1.13	-0.08	B<	10.25	-0.55	-0.02	B<
25	92.31	-0.38	-0.03	B<	7.71	-0.25	-0.02	B<	58.05	-0.33	-0.02	B<	8.17	-0.26	-0.02	B<	0.68	-0.12	-0.01	A
26	554.99	-1.20	-0.06	B<	78.60	-0.93	-0.05	B<	153.75	-0.73	-0.04	B<	117.86	-1.14	-0.07	B<	9.23	-0.59	-0.02	B<
27	57.80	-0.40	-0.02	B<	1.91	0.15	0.01	A	41.71	0.38	0.02	B>	2.96	0.19	0.01	A	0.05	0.06	0.00	A
28	65.12	0.52	0.01	B>	7.26	0.37	0.01	B>	97.85	0.71	0.03	B>	16.22	0.55	0.02	B>	2.12	0.37	0.01	A
29	22.18	-0.18	-0.01	B<	26.35	-0.43	-0.04	B<	22.83	-0.20	-0.02	B<	27.74	-0.45	-0.04	B<	10.65	-0.42	-0.03	B<
30	276.81	-0.64	-0.05	B<	10.56	-0.28	-0.02	B<	185.71	-0.59	-0.05	B<	60.42	-0.68	-0.06	B<	42.03	-0.86	-0.05	B<

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.4 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5**

Item	Reference: Male N = 41142 Focal: Female N = 39800				Reference: White N = 36148 Focal: African Am. N = 4424				Reference: White N = 36148 Focal: Hispanic N = 34027				Reference: White N = 36148 Focal: Native Am. N = 4152				Reference: White N = 36148 Focal: Asian N = 2225			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	128.25	0.44	0.04	B>	9.58	-0.27	-0.02	B<	14.24	0.16	0.02	B>	0.29	-0.05	0.00	A	5.13	-0.30	-0.02
32	88.24	0.35	0.03	B>	51.82	0.62	0.05	B>	34.90	0.25	0.02	B>	1.02	0.09	0.01	A	1.01	0.12	0.01	A
33	10.57	-0.12	-0.01	B<	2.58	-0.13	-0.01	A	10.07	-0.13	-0.02	B<	24.03	-0.42	-0.04	B<	20.15	-0.52	-0.04	B<
34	8.54	0.11	0.01	B>	12.53	0.30	0.03	B>	2.17	0.06	0.01	A	0.41	-0.06	0.00	A	3.75	0.24	0.02	A
35	586.84	-0.91	-0.08	B<	8.59	-0.25	-0.02	B<	10.44	-0.14	-0.01	B<	16.46	0.35	0.03	B>	20.27	0.59	0.04	B>
36	64.89	0.47	0.02	B>	4.80	-0.27	-0.01	A	6.93	-0.18	-0.01	B<	7.72	0.35	0.02	B>	2.25	-0.38	-0.01	A
37	1.06	0.05	0.00	A	0.49	0.08	0.00	A	0.36	-0.04	-0.01	A	0.83	-0.10	-0.01	A	0.01	-0.03	0.00	A
38	443.82	-0.90	-0.06	B<	13.77	-0.34	-0.02	B<	100.48	-0.48	-0.03	B<	31.24	-0.52	-0.04	B<	26.52	-0.81	-0.03	B<
39	35.59	-0.24	-0.02	B<	1.92	0.13	0.01	A	0.03	-0.01	0.00	A	0.64	0.08	0.01	A	2.22	-0.20	-0.01	A
40	46.64	-0.28	-0.02	B<	32.05	-0.51	-0.04	B<	48.33	-0.32	-0.02	B<	3.27	-0.17	-0.01	A	8.21	-0.42	-0.02	B<
41	197.37	0.65	0.04	B>	80.31	0.90	0.06	B>	391.86	1.04	0.07	B>	92.32	0.98	0.07	B>	56.36	1.51	0.05	C>
42	1050.28	-1.29	-0.10	B<	16.65	-0.36	-0.03	B<	13.25	-0.16	-0.01	B<	0.12	-0.03	0.00	A	1.57	0.19	0.01	A
43	45.46	-0.37	-0.02	B<	0.68	-0.10	0.00	A	211.68	-0.93	-0.04	B<	139.50	-1.29	-0.07	B<	11.30	-0.77	-0.02	B<
44	14.08	0.16	0.01	B>	2.36	-0.15	-0.01	A	198.93	-0.69	-0.05	B<	52.42	-0.67	-0.05	B<	7.32	-0.43	-0.02	B<
45	15.39	-0.15	-0.01	B<	0.02	0.01	0.00	A	13.96	0.16	0.01	B>	31.23	0.50	0.04	B>	0.67	-0.11	-0.01	A
46	340.99	-0.68	-0.06	B<	30.79	-0.46	-0.04	B<	524.34	-0.94	-0.08	B<	167.95	-1.10	-0.10	B<	31.28	-0.70	-0.05	B<
47	377.61	0.88	0.05	B>	10.04	0.32	0.02	B>	65.91	-0.42	-0.03	B<	117.66	-1.02	-0.07	B<	26.47	-0.87	-0.03	B<
48	100.62	0.38	0.03	B>	1.12	0.09	0.01	A	20.78	0.19	0.02	B>	3.50	0.16	0.02	A	25.34	0.68	0.04	B>
49	30.06	0.22	0.02	B>	2.98	-0.15	-0.01	A	19.32	0.20	0.01	B>	0.10	0.03	0.00	A	1.00	0.15	0.01	A
50	52.35	0.40	0.02	B>	6.67	-0.31	-0.02	B<	26.34	-0.33	-0.02	B<	17.19	-0.48	-0.03	B<	3.29	-0.41	-0.01	A
51	393.78	-0.91	-0.05	B<	4.56	0.21	0.01	A	12.86	0.18	0.01	B>	0.32	-0.06	-0.01	A	4.66	0.38	0.01	A
52	3.86	0.07	0.01	A	50.58	0.61	0.05	B>	65.52	0.34	0.03	B>	0.27	-0.05	0.00	A	13.93	0.49	0.03	B>
53	32.67	-0.25	-0.02	B<	17.00	-0.39	-0.03	B<	4.18	-0.10	-0.01	A	17.79	-0.42	-0.03	B<	3.80	0.32	0.01	A
54	2.17	-0.06	-0.01	A	0.09	-0.03	0.00	A	0.73	0.04	0.01	A	10.95	0.29	0.03	B>	5.63	0.33	0.02	A
55	42.57	-0.27	-0.02	B<	0.82	-0.08	-0.01	A	9.93	0.15	0.01	B>	9.97	0.29	0.02	B>	3.89	0.32	0.01	A
56	0.06	0.01	0.00	A	3.23	0.15	0.01	A	35.95	0.25	0.02	B>	20.02	0.39	0.03	B>	0.16	-0.05	0.00	A
57	10.26	-0.16	-0.01	B<	59.73	0.84	0.05	B>	62.84	0.44	0.03	B>	16.50	0.42	0.03	B>	16.11	0.84	0.02	B>
58	77.46	0.61	0.01	B>	11.16	0.48	0.02	B>	152.01	0.96	0.03	B>	44.78	0.95	0.04	B>	3.32	0.57	0.01	A
59	49.65	-0.26	-0.02	B<	0.15	-0.03	0.00	A	0.01	-0.01	0.00	A	0.26	-0.05	0.00	A	1.28	-0.15	-0.01	A
60	123.20	0.59	0.02	B>	7.27	0.32	0.02	B>	2.11	0.09	0.01	A	10.30	0.36	0.02	B>	0.21	-0.10	0.00	A

Note. African Am. = African American, Native Am. = Native American, MH  $\chi^2$  = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.4 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 5**

Item	Reference: Male N = 41142				Reference: White N = 36148				Reference: White N = 36148				Reference: White N = 36148				Reference: White N = 36148			
	Focal: Female N = 39800				Focal: African Am. N = 4424				Focal: Hispanic N = 34027				Focal: Native Am. N = 4152				Focal: Asian N = 2225			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
61	75.76	0.39	0.02	B>	0.53	0.07	0.01	A	6.85	-0.13	-0.01	B<	0.18	-0.04	0.00	A	9.68	-0.51	-0.02	B<
62	5.95	0.09	0.01	A	3.55	0.16	0.01	A	17.11	-0.17	-0.02	B<	49.29	-0.60	-0.06	B<	27.73	-0.62	-0.05	B<
63	133.07	0.44	0.04	B>	4.53	0.19	0.02	A	17.23	0.18	0.02	B>	19.80	0.40	0.03	B>	10.66	0.45	0.03	B>
64	44.43	0.25	0.02	B>	39.55	0.55	0.04	B>	10.42	0.14	0.01	B>	14.43	0.35	0.03	B>	19.47	0.55	0.04	B>
65	70.84	-0.41	-0.02	B<	17.54	0.44	0.03	B>	99.29	0.55	0.03	B>	19.06	0.45	0.03	B>	15.33	0.78	0.02	B>
66	146.47	0.45	0.04	B>	21.20	0.39	0.03	B>	48.75	0.29	0.03	B>	1.30	0.10	0.01	A	13.71	0.49	0.03	B>
67	42.05	0.24	0.02	B>	8.79	0.25	0.02	B>	11.76	0.14	0.02	B>	27.01	0.45	0.04	B>	1.66	0.17	0.01	A
68	21.56	0.18	0.01	B>	3.84	0.17	0.02	A	3.67	0.08	0.01	A	13.43	0.32	0.03	B>	1.92	0.18	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.5**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6**

Item	Reference: Male N = 40672 Focal: Female N = 39120				Reference: White N = 36121 Focal: African Am. N = 4351				Reference: White N = 36121 Focal: Hispanic N = 33085				Reference: White N = 36121 Focal: Native Am. N = 4011				Reference: White N = 36121 Focal: Asian N = 2284			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	29.34	-0.37	-0.01	B<	2.35	0.22	0.01	A	22.55	0.37	0.01	B>	11.02	0.49	0.02	B>	2.27	0.45	0.01
2	111.37	0.43	0.03	B>	10.42	-0.30	-0.02	B<	28.97	-0.24	-0.02	B<	2.81	-0.16	-0.01	A	0.35	0.08	0.01	A
3	24.33	0.22	0.01	B>	0.13	-0.04	0.00	A	0.49	0.04	0.00	A	3.94	-0.19	-0.02	A	1.21	0.19	0.01	A
4	0.49	0.03	0.00	A	1.10	-0.09	-0.01	A	4.08	0.08	0.01	A	10.82	0.28	0.03	B>	0.35	-0.07	-0.01	A
5	156.99	0.59	0.03	B>	3.26	0.19	0.01	A	166.78	0.69	0.04	B>	27.12	0.55	0.04	B>	2.70	0.29	0.01	A
6	9.38	-0.20	-0.01	B<	1.02	-0.15	0.00	A	13.33	-0.28	-0.01	B<	8.71	-0.41	-0.02	B<	0.26	-0.16	0.00	A
7	144.47	-0.50	-0.03	B<	195.74	-1.27	-0.10	B<	343.44	-0.84	-0.07	B<	243.07	-1.47	-0.12	B<	74.19	-1.18	-0.07	B<
8	224.81	-0.62	-0.04	B<	0.07	-0.03	0.00	A	56.55	-0.35	-0.02	B<	3.47	-0.18	-0.02	A	0.69	0.13	0.01	A
9	252.50	0.64	0.05	B>	1.23	-0.11	-0.01	A	19.26	-0.20	-0.02	B<	24.57	-0.52	-0.04	B<	5.79	-0.29	-0.02	A
10	77.75	-0.36	-0.03	B<	43.68	-0.59	-0.05	B<	32.96	-0.26	-0.01	B<	0.09	0.03	0.00	A	17.12	-0.59	-0.03	B<
11	0.44	0.03	0.00	A	4.49	-0.21	-0.01	A	19.73	-0.23	-0.02	B<	13.06	-0.36	-0.03	B<	4.07	-0.34	-0.01	A
12	162.73	-0.56	-0.04	B<	0.83	-0.09	-0.01	A	17.77	-0.21	-0.01	B<	0.03	0.02	0.00	A	0.00	0.02	0.00	A
13	1.16	-0.05	0.00	A	0.39	-0.07	0.00	A	1.87	-0.08	0.00	A	0.59	-0.08	0.00	A	5.26	-0.42	-0.01	A
14	335.60	-0.80	-0.05	B<	0.03	0.02	0.00	A	1.97	0.07	0.00	A	0.05	0.02	0.00	A	19.13	0.70	0.03	B>
15	78.55	0.36	0.03	B>	1.39	-0.11	-0.01	A	9.84	-0.14	-0.01	B<	5.12	-0.20	-0.02	A	6.97	-0.38	-0.02	B<
16	26.72	-0.21	-0.02	B<	0.76	-0.08	-0.01	A	9.66	-0.14	-0.02	B<	57.33	-0.71	-0.06	B<	0.08	-0.04	0.00	A
17	0.95	-0.04	0.00	A	21.40	0.43	0.03	B>	52.25	0.33	0.02	B>	0.29	0.05	0.01	A	13.24	0.55	0.03	B>
18	4.88	0.09	0.01	A	0.20	0.04	0.00	A	0.10	-0.01	0.00	A	2.61	-0.15	-0.01	A	0.67	-0.12	-0.01	A
19	95.91	0.41	0.03	B>	34.32	0.54	0.04	B>	110.16	0.49	0.04	B>	22.69	-0.44	-0.04	B<	27.09	0.81	0.04	B>
20	66.16	0.31	0.03	B>	18.05	-0.36	-0.03	B<	71.81	-0.36	-0.03	B<	61.61	-0.68	-0.06	B<	35.82	-0.77	-0.05	B<
21	27.26	0.26	0.01	B>	2.34	0.16	0.01	A	0.23	0.03	0.00	A	5.57	-0.25	-0.02	A	0.03	-0.04	0.00	A
22	0.08	0.02	0.00	A	6.81	-0.41	-0.01	B<	0.22	-0.04	0.00	A	0.01	0.02	0.00	A	14.56	-1.06	-0.01	B<
23	30.14	-0.23	-0.02	B<	5.27	0.22	0.01	A	0.85	-0.04	-0.01	A	20.30	-0.42	-0.04	B<	2.31	-0.22	-0.01	A
24	3.61	-0.08	-0.01	A	6.56	0.25	0.02	A	21.99	0.23	0.02	B>	18.46	0.42	0.03	B>	0.03	0.03	0.00	A
25	39.74	0.29	0.02	B>	0.38	-0.06	-0.01	A	81.39	0.46	0.03	B>	9.68	0.31	0.02	B>	8.72	0.52	0.02	B>
26	83.34	-0.44	-0.02	B<	0.11	-0.04	0.00	A	19.30	0.24	0.01	B>	2.19	0.16	0.01	A	2.06	0.28	0.01	A
27	66.34	0.35	0.02	B>	4.46	0.20	0.01	A	0.02	0.01	0.00	A	42.71	-0.61	-0.05	B<	0.82	0.15	0.01	A
28	56.21	-0.29	-0.02	B<	0.33	0.05	0.01	A	5.21	-0.10	-0.01	A	2.57	0.15	0.01	A	0.43	-0.09	-0.01	A
29	92.90	0.39	0.03	B>	1.66	0.12	0.01	A	70.46	0.39	0.03	B>	15.84	0.38	0.03	B>	15.75	0.59	0.03	B>
30	0.54	-0.03	0.00	A	57.97	0.79	0.05	B>	188.74	0.72	0.05	B>	89.73	0.98	0.07	B>	12.28	0.64	0.02	B>

Note. African Am. = African American, Native Am. = Native American, MH  $\chi^2$  = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD = Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.5 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6**

Item	Reference: Male N = 40672 Focal: Female N = 39120				Reference: White N = 36121 Focal: African Am. N = 4351				Reference: White N = 36121 Focal: Hispanic N = 33085				Reference: White N = 36121 Focal: Native Am. N = 4011				Reference: White N = 36121 Focal: Asian N = 2284			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	21.08	0.20	0.01	B>	1.29	-0.11	-0.01	A	21.07	-0.23	-0.02	B<	3.11	-0.18	-0.01	A	14.54	-0.56	-0.03
32	0.89	0.08	0.00	A	0.74	-0.15	0.00	A	15.20	-0.37	-0.01	B<	6.42	0.47	0.01	A	9.20	-0.97	-0.01	B<
33	2.67	-0.07	0.00	A	0.11	-0.03	0.00	A	4.92	0.10	0.01	A	15.15	0.37	0.03	B>	0.91	0.14	0.01	A
34	113.94	0.46	0.03	B>	5.91	0.23	0.02	A	36.83	0.29	0.02	B>	7.02	0.25	0.02	B>	2.27	-0.23	-0.01	A
35	314.23	-0.65	-0.06	B<	0.23	0.04	0.00	A	4.62	-0.09	0.00	A	2.95	0.15	0.01	A	4.85	-0.26	-0.02	A
36	148.21	-0.52	-0.03	B<	28.04	-0.49	-0.04	B<	50.83	-0.34	-0.02	B<	9.28	-0.29	-0.02	B<	1.65	-0.20	-0.01	A
37	280.48	0.83	0.04	B>	3.07	0.19	0.01	A	11.78	-0.19	-0.01	B<	2.76	0.18	0.01	A	0.27	-0.10	0.00	A
38	17.47	-0.19	-0.01	B<	8.93	0.30	0.02	B>	45.28	0.35	0.02	B>	29.19	0.55	0.04	B>	3.39	0.33	0.01	A
39	25.52	-0.20	-0.01	B<	1.04	-0.09	-0.01	A	3.76	-0.09	-0.01	A	18.10	-0.39	-0.03	B<	1.03	-0.14	-0.01	A
40	5.08	0.08	0.01	A	3.03	-0.15	-0.01	A	8.84	0.12	0.02	B>	7.87	0.24	0.02	B>	3.13	-0.22	-0.02	A
41	170.66	0.65	0.03	B>	29.09	0.59	0.04	B>	101.94	0.56	0.04	B>	22.83	0.52	0.03	B>	40.48	1.34	0.04	B>
42	0.92	-0.04	0.00	A	0.06	0.03	0.00	A	3.01	-0.09	-0.01	A	7.28	-0.33	-0.02	B<	33.00	0.74	0.05	B>
43	108.21	-0.47	-0.03	B<	1.65	0.13	0.01	A	4.60	-0.11	-0.01	A	0.59	-0.08	-0.01	A	6.26	0.43	0.02	A
44	5.13	-0.08	-0.01	A	48.10	0.59	0.05	B>	30.17	0.23	0.02	B>	5.99	0.21	0.02	A	6.62	0.32	0.02	A
45	6.02	0.11	0.01	A	0.31	-0.06	-0.01	A	22.81	-0.24	-0.02	B<	23.94	-0.49	-0.04	B<	9.24	0.55	0.02	B>
46	135.77	-0.46	-0.04	B<	3.58	-0.17	-0.01	A	54.43	0.33	0.02	B>	5.84	0.22	0.02	A	2.01	0.19	0.01	A
47	3.21	-0.09	0.00	A	22.75	0.51	0.03	B>	44.49	0.37	0.02	B>	11.91	0.36	0.02	B>	6.17	0.50	0.01	A
48	136.07	0.44	0.04	B>	5.81	0.21	0.02	A	15.67	-0.17	-0.02	B<	1.49	0.11	0.01	A	0.24	0.06	0.00	A
49	77.56	0.49	0.02	B>	0.25	0.06	0.00	A	39.67	0.40	0.02	B>	23.20	0.58	0.03	B>	0.00	0.01	0.00	A
50	390.54	0.71	0.07	B>	5.60	0.20	0.02	A	0.61	0.03	0.00	A	0.41	-0.06	-0.01	A	5.43	-0.27	-0.02	A
51	92.63	-0.41	-0.03	B<	1.77	-0.13	-0.01	A	8.26	-0.14	-0.01	B<	6.49	0.25	0.02	A	0.04	-0.03	0.00	A
52	70.51	-0.32	-0.03	B<	0.83	0.08	0.01	A	55.22	-0.31	-0.03	B<	67.85	-0.71	-0.07	B<	0.17	0.06	0.00	A
53	316.77	-0.71	-0.05	B<	8.28	-0.25	-0.02	B<	10.76	0.15	0.02	B>	63.90	0.72	0.07	B>	0.03	-0.03	0.00	A
54	365.47	-0.75	-0.06	B<	0.01	-0.01	0.00	A	40.00	-0.28	-0.02	B<	1.17	-0.10	-0.01	A	0.61	0.11	0.01	A
55	243.70	0.77	0.04	B>	2.37	-0.16	-0.01	A	0.40	0.04	0.01	A	51.25	0.82	0.05	B>	7.02	-0.45	-0.02	B<
56	184.57	0.58	0.04	B>	4.54	0.20	0.02	A	9.63	-0.15	-0.01	B<	7.91	0.28	0.02	B>	0.50	-0.11	-0.01	A
57	2.58	-0.07	0.00	A	0.30	0.05	0.00	A	4.80	0.11	0.01	A	10.91	0.32	0.02	B>	9.58	0.51	0.02	B>
58	0.03	-0.01	0.00	A	13.91	0.34	0.03	B>	43.42	0.31	0.02	B>	59.14	0.73	0.06	B>	0.35	0.09	0.00	A
59	40.10	0.29	0.02	B>	4.25	0.20	0.01	A	2.29	-0.08	0.00	A	5.16	-0.22	-0.02	A	0.00	0.01	0.00	A
60	74.50	0.38	0.02	B>	7.96	-0.27	-0.02	B<	19.78	0.22	0.02	B>	5.27	0.23	0.02	A	0.00	0.01	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.5 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 6**

Reference: Male N = 40672 Focal: Female N = 39120				Reference: White N = 36121 Focal: African Am. N = 4351				Reference: White N = 36121 Focal: Hispanic N = 33085				Reference: White N = 36121 Focal: Native Am. N = 4011				Reference: White N = 36121 Focal: Asian N = 2284				
Item	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag				
61	242.15	-0.61	-0.05	B<	2.81	-0.15	-0.01	A	74.28	-0.38	-0.03	B<	77.77	-0.81	-0.07	B<	63.69	-1.01	-0.07	B<
62	45.22	0.27	0.02	B>	20.28	0.41	0.03	B>	66.12	0.36	0.03	B>	33.24	0.53	0.04	B>	54.40	1.12	0.06	B>
63	1.34	-0.04	0.00	A	32.20	-0.48	-0.04	B<	59.43	-0.32	-0.03	B<	29.34	-0.47	-0.04	B<	34.01	-0.69	-0.05	B<
64	534.94	0.94	0.07	B>	4.27	0.19	0.02	A	2.59	0.07	0.01	A	28.01	0.49	0.04	B>	15.77	0.59	0.03	B>
65	37.10	0.27	0.02	B>	1.90	-0.14	-0.01	A	1.60	0.06	0.01	A	3.24	-0.17	-0.01	A	0.35	-0.10	0.00	A
66	209.20	-0.56	-0.04	B<	10.98	-0.29	-0.02	B<	67.81	-0.35	-0.03	B<	30.62	-0.50	-0.04	B<	6.94	-0.34	-0.02	B<
67	58.85	-0.34	-0.02	B<	11.73	-0.33	-0.02	B<	7.56	0.14	0.00	B>	30.10	0.55	0.04	B>	8.46	0.51	0.02	B>
68	35.06	0.29	0.01	B>	1.00	-0.11	-0.01	A	2.68	-0.09	-0.01	A	1.48	-0.13	-0.01	A	3.07	-0.33	-0.01	A

Note: African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.6**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7**

Item	Reference: Male N = 40664				Reference: White N = 36321				Reference: White N = 36321				Reference: White N = 36321				Reference: White N = 36321			
	Focal: Female N = 39220				Focal: African Am. N = 4343				Focal: Hispanic N = 32808				Focal: Native Am. N = 4374				Focal: Asian N = 2106			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	13.63	-0.20	-0.01	B<	1.18	-0.14	-0.01	A	251.14	-0.99	-0.06	B<	71.60	-0.94	-0.05	B<	13.66	-0.78	-0.02	B<
2	140.80	-0.43	-0.04	B<	13.88	-0.31	-0.03	B<	123.69	-0.45	-0.05	B<	109.22	-0.86	-0.08	B<	0.41	0.08	0.01	A
3	63.33	-0.31	-0.02	B<	81.34	-0.76	-0.07	B<	2.73	-0.07	-0.01	A	139.80	-0.97	-0.09	B<	35.37	-0.80	-0.05	B<
4	0.05	0.01	0.00	A	3.37	0.19	0.01	A	2.39	0.08	0.00	A	5.78	-0.23	-0.02	A	13.78	0.71	0.02	B>
5	0.08	0.01	0.00	A	14.98	-0.36	-0.03	B<	25.50	-0.24	-0.02	B<	0.69	-0.08	-0.01	A	11.18	-0.51	-0.02	B<
6	35.12	0.25	0.02	B>	11.04	0.31	0.02	B>	94.54	0.46	0.04	B>	48.69	0.64	0.05	B>	7.26	0.45	0.02	B>
7	198.22	-0.76	-0.03	B<	9.98	-0.37	-0.02	B<	105.47	-0.64	-0.03	B<	0.39	-0.08	0.00	A	6.00	-0.54	-0.01	A
8	17.97	-0.17	-0.01	B<	1.61	0.12	0.01	A	101.34	0.46	0.03	B>	13.66	0.33	0.03	B>	5.78	0.37	0.02	A
9	208.05	-0.56	-0.04	B<	8.30	-0.25	-0.02	B<	5.57	-0.10	-0.01	A	41.50	-0.55	-0.05	B<	0.06	-0.04	0.00	A
10	27.87	0.23	0.01	B>	0.54	0.07	0.01	A	0.48	-0.04	0.00	A	0.34	-0.06	0.00	A	0.00	-0.01	0.00	A
11	0.07	0.01	0.00	A	0.03	-0.02	0.00	A	91.40	-0.58	-0.03	B<	56.67	-0.78	-0.04	B<	35.34	-1.12	-0.03	B<
12	9.73	-0.13	-0.01	B<	3.11	-0.17	-0.01	A	92.22	-0.44	-0.03	B<	120.84	-1.01	-0.08	B<	19.00	-0.65	-0.03	B<
13	21.59	-0.19	-0.01	B<	11.41	-0.30	-0.02	B<	4.12	0.09	0.01	A	39.46	0.56	0.05	B>	0.09	-0.05	0.00	A
14	5.27	-0.08	-0.01	A	9.37	-0.26	-0.02	B<	0.17	0.02	0.00	A	1.09	0.09	0.01	A	0.01	0.02	0.00	A
15	98.18	0.49	0.02	B>	0.09	0.03	0.00	A	4.22	0.12	0.01	A	0.20	0.05	0.00	A	0.83	0.19	0.01	A
16	9.11	0.15	0.01	B>	5.52	-0.25	-0.02	A	0.35	-0.03	0.00	A	0.00	0.00	0.00	A	0.53	-0.14	0.00	A
17	49.87	0.27	0.02	B>	1.65	0.12	0.01	A	12.66	-0.15	-0.01	B<	0.09	0.03	0.00	A	0.51	-0.09	-0.01	A
18	716.95	-1.02	-0.09	B<	23.49	-0.42	-0.04	B<	188.47	-0.58	-0.05	B<	42.12	-0.55	-0.05	B<	21.06	-0.59	-0.04	B<
19	23.00	-0.26	-0.01	B<	0.25	0.06	0.00	A	2.09	0.09	0.00	A	12.98	0.42	0.02	B>	0.00	-0.02	0.00	A
20	38.23	0.28	0.02	B>	1.69	-0.13	-0.01	A	77.46	-0.45	-0.03	B<	13.94	-0.35	-0.02	B<	22.51	-0.81	-0.03	B<
21	8.37	0.11	0.01	B>	0.47	-0.06	0.00	A	3.01	-0.07	0.00	A	3.26	0.15	0.01	A	0.66	-0.11	-0.01	A
22	87.04	0.42	0.03	B>	39.37	-0.60	-0.04	B<	297.83	-0.87	-0.06	B<	102.67	-0.93	-0.07	B<	58.40	-1.26	-0.05	B<
23	660.19	-1.17	-0.07	B<	46.06	-0.66	-0.05	B<	27.71	-0.27	-0.03	B<	23.98	-0.48	-0.04	B<	10.37	-0.52	-0.02	B<
24	37.47	0.25	0.02	B>	30.61	0.51	0.04	B>	13.29	0.17	0.01	B>	82.73	0.83	0.07	B>	12.99	0.56	0.03	B>
25	10.11	-0.14	-0.01	B<	8.63	0.28	0.02	B>	29.69	-0.26	-0.02	B<	61.69	-0.71	-0.06	B<	1.88	0.24	0.01	A
26	144.49	0.66	0.03	B>	1.52	-0.15	-0.01	A	34.79	-0.37	-0.02	B<	115.94	-1.14	-0.06	B<	4.33	-0.47	-0.01	A
27	82.26	0.36	0.03	B>	3.46	0.16	0.01	A	267.18	0.73	0.06	B>	143.64	1.07	0.09	B>	4.62	0.30	0.02	A
28	12.48	0.17	0.01	B>	3.43	0.19	0.01	A	6.62	-0.14	-0.01	A	40.61	-0.60	-0.04	B<	6.55	-0.46	-0.02	A
29	13.78	0.23	0.01	B>	4.42	0.27	0.01	A	39.14	0.44	0.02	B>	8.41	0.37	0.02	B>	2.45	0.45	0.01	A
30	14.62	-0.16	-0.01	B<	17.30	-0.37	-0.03	B<	92.90	-0.44	-0.03	B<	31.72	-0.51	-0.04	B<	1.85	-0.21	-0.01	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.6 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7**

Item	Reference: Male N = 40664				Reference: White N = 36321				Reference: White N = 36321				Reference: White N = 36321				Reference: White N = 36321			
	Focal: Female N = 39220				Focal: African Am. N = 4343				Focal: Hispanic N = 32808				Focal: Native Am. N = 4374				Focal: Asian N = 2106			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
31	0.02	0.01	0.00	A	0.51	0.08	0.00	A	1.77	0.07	0.00	A	8.72	0.31	0.02	B>	8.86	-0.52	-0.02	B<
32	1.27	-0.05	0.00	A	45.61	0.61	0.05	B>	31.32	0.26	0.02	B>	0.81	-0.08	0.00	A	32.05	0.94	0.04	B>
33	37.41	0.28	0.02	B>	51.92	0.76	0.05	B>	5.91	0.13	0.01	A	10.63	-0.31	-0.02	B<	9.54	0.63	0.02	B>
34	87.27	-0.40	-0.03	B<	2.44	0.15	0.01	A	238.21	0.75	0.06	B>	140.57	1.17	0.09	B>	1.83	0.22	0.01	A
35	85.32	-0.44	-0.02	B<	0.31	0.06	0.00	A	19.40	0.24	0.02	B>	0.13	-0.04	0.00	A	3.07	0.35	0.01	A
36	58.84	0.32	0.02	B>	7.59	0.25	0.02	B>	221.87	0.70	0.05	B>	57.97	0.70	0.06	B>	22.23	0.74	0.04	B>
37	9.42	-0.13	-0.01	B<	4.28	-0.19	-0.01	A	67.00	-0.39	-0.02	B<	0.01	0.01	0.00	A	1.07	-0.18	-0.01	A
38	113.99	0.56	0.02	B>	0.30	0.06	0.00	A	23.78	-0.29	-0.01	B<	14.52	-0.41	-0.02	B<	6.72	-0.56	-0.01	B<
39	65.80	0.35	0.02	B>	0.04	0.02	0.00	A	0.84	0.04	0.01	A	4.50	-0.19	-0.01	A	0.04	0.04	0.00	A
40	2.32	-0.06	0.00	A	27.37	0.49	0.03	B>	95.64	0.44	0.03	B>	19.02	0.41	0.03	B>	39.78	0.78	0.06	B>
41	542.88	1.06	0.06	B>	0.52	0.07	0.01	A	2.92	-0.09	0.00	A	39.86	-0.60	-0.04	B<	4.83	0.42	0.01	A
42	413.25	0.80	0.06	B>	0.11	-0.03	0.00	A	216.05	0.65	0.05	B>	92.74	0.85	0.07	B>	14.02	0.55	0.03	B>
43	48.59	0.25	0.02	B>	0.05	0.02	0.00	A	0.87	0.04	0.00	A	17.63	-0.35	-0.03	B<	2.59	0.20	0.02	A
44	133.51	-0.43	-0.04	B<	9.47	-0.28	-0.02	B<	5.51	0.10	0.01	A	13.31	0.32	0.02	B>	3.30	-0.22	-0.02	A
45	103.37	-0.37	-0.03	B<	30.63	-0.46	-0.04	B<	37.26	0.25	0.01	B>	4.23	0.17	0.02	A	38.67	-0.73	-0.06	B<
46	1.36	0.04	0.00	A	21.08	0.38	0.04	B>	0.01	0.00	0.00	A	0.02	-0.01	0.00	A	22.30	0.56	0.05	B>
47	54.79	0.32	0.02	B>	5.96	0.24	0.02	A	1.26	0.06	0.01	A	0.92	0.09	0.01	A	6.07	0.43	0.02	A
48	48.69	-0.28	-0.02	B<	0.00	0.00	0.00	A	0.55	-0.03	0.00	A	47.51	0.63	0.05	B>	0.19	-0.07	0.00	A
49	7.63	0.17	0.00	B>	25.03	0.67	0.03	B>	90.95	0.68	0.03	B>	11.14	0.42	0.02	B>	0.83	0.27	0.00	A
50	9.09	0.14	0.01	B>	15.65	0.41	0.03	B>	0.66	0.04	0.00	A	4.21	-0.20	-0.01	A	9.89	0.63	0.02	B>
51	1.24	0.06	0.00	A	0.04	-0.02	0.00	A	137.75	-0.69	-0.04	B<	55.46	-0.76	-0.05	B<	0.89	0.23	0.00	A
52	598.04	-1.31	-0.05	B<	11.49	-0.38	-0.02	B<	46.85	-0.41	-0.02	B<	4.92	-0.24	-0.01	A	3.25	0.44	0.01	A
53	22.68	0.27	0.01	B>	7.85	0.35	0.02	B>	14.30	0.25	0.01	B>	5.36	-0.26	-0.01	A	4.32	-0.45	-0.01	A
54	8.40	0.16	0.01	B>	4.49	0.26	0.01	A	4.55	-0.14	0.00	A	21.49	-0.51	-0.03	B<	4.75	0.57	0.01	A
55	6.91	-0.13	-0.01	B<	0.48	-0.07	0.00	A	1.53	-0.07	0.00	A	32.95	0.63	0.04	B>	0.02	0.03	0.00	A
56	59.96	0.30	0.02	B>	5.43	0.20	0.02	A	123.82	0.48	0.04	B>	34.25	0.50	0.04	B>	13.29	0.50	0.03	B>
57	0.91	-0.04	0.00	A	4.98	0.22	0.01	A	104.76	0.53	0.03	B>	58.30	0.76	0.05	B>	1.86	0.26	0.01	A
58	31.97	-0.20	-0.02	B<	3.29	-0.15	-0.01	A	164.80	-0.52	-0.05	B<	62.40	-0.66	-0.06	B<	5.68	-0.28	-0.02	A
59	0.05	0.01	0.00	A	10.74	0.29	0.03	B>	1.13	0.05	0.00	A	0.77	0.08	0.01	A	2.48	-0.22	-0.01	A
60	124.45	0.42	0.04	B>	0.68	0.07	0.01	A	186.75	0.58	0.05	B>	293.41	1.49	0.13	B>	1.11	0.14	0.01	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.6 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 7**

Reference: Male N = 40664 Focal: Female N = 39220				Reference: White N = 36321 Focal: African Am. N = 4343				Reference: White N = 36321 Focal: Hispanic N = 32808				Reference: White N = 36321 Focal: Native Am. N = 4374				Reference: White N = 36321 Focal: Asian N = 2106				
Item	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag				
61	3.43	-0.07	-0.01	A	1.37	-0.10	-0.01	A	19.51	-0.19	-0.01	B<	9.59	-0.27	-0.02	B<	2.85	0.22	0.02	A
62	75.60	0.40	0.02	B>	2.05	0.14	0.01	A	140.23	0.62	0.04	B>	56.28	0.75	0.05	B>	2.84	0.32	0.01	A
63	33.01	0.24	0.02	B>	0.00	0.00	0.00	A	31.27	-0.26	-0.01	B<	3.21	0.17	0.01	A	8.28	-0.43	-0.02	B<
64	33.56	-0.23	-0.02	B<	5.83	-0.22	-0.02	A	36.61	-0.27	-0.02	B<	4.07	0.18	0.02	A	0.04	-0.03	0.00	A
65	89.89	-0.40	-0.03	B<	4.21	-0.19	-0.02	A	38.65	-0.29	-0.02	B<	14.46	0.35	0.03	B>	2.50	-0.25	-0.01	A
66	9.81	-0.12	-0.01	B<	0.00	0.00	0.00	A	3.80	-0.08	-0.01	A	29.89	-0.48	-0.04	B<	0.01	0.02	0.00	A
67	483.93	1.18	0.05	B>	2.67	0.19	0.01	A	52.81	0.44	0.03	B>	78.99	1.01	0.06	B>	0.74	-0.18	0.00	A
68	21.95	0.22	0.01	B>	12.45	0.36	0.02	B>	48.65	0.38	0.02	B>	10.26	0.32	0.02	B>	2.27	0.29	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.7**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8**

Item	Reference: Male N = 39768				Reference: White N = 36417				Reference: White N = 36417				Reference: White N = 36417				Reference: White N = 36417			
	Focal: Female N = 38625				Focal: African Am. N = 4302				Focal: Hispanic N = 31232				Focal: Native Am. N = 4481				Focal: Asian N = 2027			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	0.00	0.00	0.00	A	53.84	-0.63	-0.05	B<	147.50	-0.52	-0.04	B<	0.36	0.05	0.00	A	8.61	-0.38	-0.03	B<
2	269.28	-0.62	-0.05	B<	17.74	-0.36	-0.03	B<	44.54	0.29	0.02	B>	70.25	0.71	0.06	B>	3.34	-0.24	-0.02	A
3	618.25	-0.99	-0.08	B<	2.99	-0.15	-0.01	A	14.60	0.17	0.02	B>	49.85	0.60	0.06	B>	1.08	0.16	0.01	A
4	98.62	-0.59	-0.02	B<	0.41	0.09	0.00	A	82.27	-0.64	-0.03	B<	31.78	-0.68	-0.03	B<	8.03	-0.69	-0.01	B<
5	38.82	-0.26	-0.02	B<	5.67	-0.22	-0.02	A	53.24	-0.35	-0.03	B<	62.89	-0.70	-0.06	B<	11.73	-0.53	-0.03	B<
6	155.34	0.47	0.04	B>	1.97	0.12	0.01	A	30.90	0.24	0.02	B>	23.49	0.41	0.03	B>	8.95	0.40	0.03	B>
7	27.08	0.19	0.02	B>	8.26	0.24	0.02	B>	0.90	0.04	0.00	A	0.43	-0.05	0.00	A	0.02	-0.02	0.00	A
8	20.45	0.26	0.01	B>	10.43	0.40	0.02	B>	0.37	-0.04	0.00	A	7.66	-0.31	-0.02	B<	7.96	0.80	0.01	B>
9	343.87	-0.72	-0.06	B<	10.70	-0.28	-0.03	B<	5.12	-0.10	-0.01	A	0.60	0.07	0.01	A	5.64	-0.34	-0.02	A
10	0.01	-0.01	0.00	A	24.15	0.65	0.03	B>	7.12	0.19	0.01	B>	26.48	-0.59	-0.03	B<	0.32	0.17	0.00	A
11	59.36	-0.32	-0.02	B<	1.88	-0.13	-0.01	A	23.95	-0.23	-0.02	B<	1.27	-0.10	-0.01	A	1.46	-0.20	-0.01	A
12	0.41	0.03	0.00	A	0.09	-0.03	0.00	A	1.79	-0.06	-0.01	A	25.05	-0.44	-0.04	B<	11.13	0.46	0.03	B>
13	90.97	0.39	0.03	B>	17.50	0.38	0.03	B>	2.20	0.07	0.01	A	14.10	-0.33	-0.03	B<	5.57	0.36	0.02	A
14	0.36	-0.03	0.00	A	0.00	-0.01	0.00	A	40.67	0.34	0.02	B>	2.91	0.17	0.01	A	10.77	0.67	0.02	B>
15	538.96	-1.12	-0.06	B<	32.30	-0.57	-0.04	B<	105.11	-0.56	-0.03	B<	1.78	0.14	0.01	A	25.29	-0.88	-0.03	B<
16	375.84	0.89	0.05	B>	9.77	0.32	0.02	B>	2.84	-0.09	0.00	A	23.27	-0.44	-0.03	B<	2.46	-0.28	-0.01	A
17	223.45	0.68	0.04	B>	15.08	0.39	0.03	B>	8.37	0.15	0.01	B>	6.52	0.25	0.02	A	0.50	-0.13	-0.01	A
18	148.32	0.52	0.04	B>	0.29	0.05	0.00	A	80.05	0.43	0.03	B>	45.02	0.61	0.05	B>	14.14	0.64	0.03	B>
19	273.32	-0.69	-0.05	B<	0.01	-0.01	0.00	A	45.25	-0.31	-0.03	B<	4.73	-0.19	-0.02	A	0.06	0.04	0.00	A
20	92.75	0.44	0.03	B>	31.70	0.57	0.04	B>	40.42	0.32	0.02	B>	0.94	0.09	0.01	A	22.75	0.90	0.03	B>
21	119.67	-0.48	-0.03	B<	93.05	-0.89	-0.07	B<	0.00	0.00	0.00	A	40.70	0.60	0.05	B>	4.42	-0.35	-0.02	A
22	0.03	-0.01	0.00	A	3.84	-0.19	-0.02	A	13.46	0.19	0.01	B>	23.14	0.46	0.03	B>	0.03	0.04	0.00	A
23	265.05	0.79	0.04	B>	0.61	0.09	0.00	A	3.08	-0.10	-0.01	A	0.95	-0.10	-0.01	A	0.80	0.19	0.01	A
24	64.32	0.38	0.02	B>	1.78	0.14	0.01	A	12.74	-0.19	-0.01	B<	47.21	-0.66	-0.05	B<	4.05	0.41	0.01	A
25	7.80	0.11	0.01	B>	30.10	0.48	0.04	B>	1.46	0.05	0.01	A	2.89	-0.14	-0.01	A	0.16	0.06	0.00	A
26	142.48	-0.45	-0.04	B<	3.22	-0.15	-0.01	A	55.24	-0.32	-0.03	B<	0.74	-0.07	-0.01	A	19.41	-0.57	-0.04	B<
27	31.40	-0.22	-0.02	B<	3.15	-0.17	-0.01	A	0.23	0.02	0.00	A	4.46	-0.20	-0.01	A	1.09	0.13	0.01	A
28	59.88	0.43	0.02	B>	6.62	0.31	0.01	A	39.86	0.40	0.02	B>	0.24	0.06	0.00	A	4.35	0.51	0.01	A
29	66.95	0.30	0.03	B>	48.04	0.59	0.05	B>	199.66	0.60	0.05	B>	75.70	0.73	0.06	B>	0.87	0.11	0.01	A
30	282.37	-0.67	-0.05	B<	31.97	-0.54	-0.04	B<	49.56	-0.32	-0.03	B<	10.67	-0.31	-0.02	B<	9.33	-0.40	-0.03	B<

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.7 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8**

Item	Reference: Male N = 39768 Focal: Female N = 38625				Reference: White N = 36417 Focal: African Am. N = 4302				Reference: White N = 36417 Focal: Hispanic N = 31232				Reference: White N = 36417 Focal: Native Am. N = 4481				Reference: White N = 36417 Focal: Asian N = 2027			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	58.06	0.29	0.02	B>	24.25	0.42	0.04	B>	82.66	0.40	0.03	B>	5.01	0.19	0.02	A	3.49	0.26	0.02
32	0.39	0.03	0.00	A	0.93	-0.10	-0.01	A	29.73	0.29	0.02	B>	0.73	-0.08	-0.01	A	4.65	-0.37	-0.02	A
33	1.16	-0.04	0.00	A	0.56	-0.06	0.00	A	2.01	0.06	0.01	A	19.71	0.37	0.03	B>	1.09	0.14	0.01	A
34	7.35	0.12	0.01	B>	40.50	0.64	0.04	B>	34.58	0.31	0.02	B>	12.52	0.35	0.02	B>	1.05	0.19	0.01	A
35	0.52	0.03	0.00	A	0.02	0.01	0.00	A	3.02	-0.08	-0.01	A	0.00	0.00	0.00	A	12.74	-0.43	-0.04	B<
36	11.61	0.13	0.01	B>	8.60	0.26	0.02	B>	5.09	0.10	0.00	A	1.16	-0.10	-0.01	A	7.19	0.33	0.03	B>
37	16.45	0.17	0.01	B>	0.87	-0.09	-0.01	A	7.74	0.14	0.01	B>	1.38	0.11	0.01	A	0.65	-0.13	-0.01	A
38	73.91	-0.34	-0.03	B<	23.97	-0.43	-0.04	B<	0.16	-0.02	0.00	A	0.12	0.03	0.00	A	0.47	-0.10	-0.01	A
39	31.99	-0.23	-0.02	B<	0.00	-0.01	0.00	A	41.96	-0.30	-0.02	B<	6.67	0.23	0.02	B>	0.06	0.04	0.00	A
40	1.04	-0.04	0.00	A	7.88	-0.25	-0.02	B<	12.60	0.16	0.01	B>	30.32	0.49	0.04	B>	0.08	-0.05	0.00	A
41	110.16	0.42	0.03	B>	13.39	0.33	0.03	B>	161.82	0.59	0.05	B>	1.04	-0.09	-0.01	A	12.44	0.53	0.03	B>
42	299.83	-1.14	-0.03	B<	34.19	-0.77	-0.03	B<	37.53	-0.48	-0.02	B<	82.57	-1.13	-0.05	B<	16.40	-1.02	-0.02	B<
43	47.12	0.28	0.02	B>	92.50	0.87	0.07	B>	71.07	0.38	0.03	B>	6.16	-0.22	-0.02	A	31.94	0.85	0.05	B>
44	391.54	-0.81	-0.06	B<	127.88	-1.00	-0.08	B<	223.04	-0.68	-0.05	B<	40.61	-0.56	-0.05	B<	29.02	-0.81	-0.04	B<
45	19.16	-0.20	-0.01	B<	3.10	0.18	0.01	A	8.54	-0.15	-0.01	B<	23.41	-0.45	-0.03	B<	10.86	0.63	0.02	B>
46	146.21	0.46	0.04	B>	5.39	0.20	0.02	A	28.26	0.23	0.02	B>	21.45	0.40	0.03	B>	4.02	0.27	0.02	A
47	105.34	0.43	0.03	B>	3.67	0.19	0.01	A	85.26	-0.44	-0.04	B<	159.44	-1.10	-0.09	B<	13.88	-0.54	-0.03	B<
48	168.62	0.52	0.04	B>	0.63	0.07	0.01	A	29.29	-0.24	-0.01	B<	13.49	-0.31	-0.02	B<	0.97	-0.15	-0.01	A
49	251.24	0.64	0.05	B>	3.54	0.17	0.01	A	1.57	-0.06	-0.01	A	0.95	-0.09	-0.01	A	0.28	0.08	0.00	A
50	38.67	-0.24	-0.02	B<	0.04	-0.02	0.00	A	12.13	-0.15	-0.01	B<	15.15	-0.32	-0.03	B<	2.55	-0.22	-0.01	A
51	156.67	0.73	0.03	B>	40.90	0.82	0.04	B>	32.44	0.38	0.01	B>	3.63	-0.22	-0.01	A	20.21	1.28	0.02	B>
52	0.51	-0.03	0.00	A	3.25	0.16	0.01	A	15.80	0.18	0.01	B>	1.48	0.11	0.01	A	61.23	1.30	0.06	B>
53	532.50	-0.90	-0.07	B<	19.62	-0.41	-0.03	B<	36.45	-0.27	-0.02	B<	2.27	0.14	0.01	A	24.38	-0.61	-0.05	B<
54	930.50	-1.19	-0.10	B<	41.73	-0.56	-0.05	B<	589.83	-1.04	-0.09	B<	229.26	-1.34	-0.11	B<	45.63	-0.87	-0.06	B<
55	62.28	0.33	0.02	B>	5.75	0.22	0.02	A	98.41	0.47	0.04	B>	66.93	0.75	0.06	B>	7.94	0.45	0.02	B>
56	145.62	0.60	0.03	B>	29.26	0.58	0.04	B>	31.14	0.31	0.02	B>	7.41	-0.27	-0.02	B<	11.40	0.74	0.02	B>
57	35.28	-0.33	-0.01	B<	5.86	-0.27	-0.01	A	11.96	0.22	0.01	B>	58.77	0.93	0.05	B>	0.03	-0.05	0.00	A
58	2.89	0.07	0.01	A	11.04	-0.30	-0.02	B<	13.73	0.18	0.02	B>	45.37	0.61	0.05	B>	7.21	-0.42	-0.02	B<
59	93.96	-0.40	-0.03	B<	11.94	-0.31	-0.02	B<	0.98	0.05	0.01	A	27.48	0.47	0.04	B>	8.75	0.48	0.02	B>
60	52.01	0.28	0.02	B>	3.68	0.17	0.01	A	0.12	0.02	0.00	A	2.43	-0.13	-0.01	A	1.37	0.16	0.01	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.7 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT Grade 8**

Reference: Male N = 39768 Focal: Female N = 38625				Reference: White N = 36417 Focal: African Am. N = 4302				Reference: White N = 36417 Focal: Hispanic N = 31232				Reference: White N = 36417 Focal: Native Am. N = 4481				Reference: White N = 36417 Focal: Asian N = 2027				
Item	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag				
61	132.16	0.48	0.03	B>	0.14	0.04	0.00	A	5.89	0.12	0.02	A	6.96	0.24	0.02	B>	0.10	0.05	0.00	A
62	4.02	-0.07	-0.01	A	0.04	0.02	0.00	A	22.70	-0.20	-0.02	B<	12.53	-0.29	-0.03	B<	0.88	-0.13	-0.01	A
63	44.75	0.26	0.02	B>	18.10	-0.39	-0.03	B<	5.38	-0.10	-0.01	A	19.51	-0.41	-0.03	B<	20.53	-0.55	-0.05	B<
64	62.46	0.37	0.02	B>	0.31	0.06	0.01	A	49.21	-0.38	-0.02	B<	10.68	-0.31	-0.02	B<	0.04	-0.04	0.00	A
65	0.48	0.03	0.00	A	22.53	-0.46	-0.03	B<	16.60	0.21	0.02	B>	84.76	0.89	0.07	B>	8.13	0.52	0.02	B>
66	871.57	1.44	0.07	B>	17.67	0.45	0.03	B>	34.98	0.32	0.02	B>	35.38	0.60	0.04	B>	0.01	-0.02	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.8**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT High School**

Item	Reference: Male N = 34601				Reference: White N = 34719				Reference: White N = 34719				Reference: White N = 34719				Reference: White N = 34719			
	Focal: Female N = 33879				Focal: African Am. N = 3812				Focal: Hispanic N = 23835				Focal: Native Am. N = 4191				Focal: Asian N = 1953			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	3.31	0.08	0.01	A	20.39	0.46	0.03	B>	108.87	0.55	0.04	B>	59.86	0.76	0.05	B>	21.74	0.79	0.04	B>
2	368.09	-0.79	-0.07	B<	99.39	-0.92	-0.08	B<	103.99	-0.47	-0.04	B<	20.24	-0.39	-0.04	B<	21.01	-0.61	-0.04	B<
3	65.40	-0.56	-0.02	B<	13.97	-0.50	-0.02	B<	7.14	0.21	0.01	B>	45.40	1.01	0.04	B>	2.77	-0.43	-0.01	A
4	7.90	0.19	0.01	B>	1.38	-0.17	-0.01	A	0.41	0.05	0.00	A	0.69	-0.11	0.00	A	0.92	-0.28	0.00	A
5	110.23	-0.43	-0.04	B<	9.06	0.28	0.02	B>	27.00	0.25	0.03	B>	1.20	0.10	0.01	A	1.19	0.16	0.01	A
6	21.62	0.22	0.01	B>	3.33	0.18	0.01	A	27.37	0.28	0.02	B>	1.06	-0.10	-0.01	A	6.37	0.45	0.02	A
7	7.58	0.11	0.01	B>	2.36	0.14	0.01	A	20.36	0.21	0.02	B>	0.22	0.04	0.00	A	32.46	0.80	0.05	B>
8	10.65	-0.18	-0.01	B<	16.39	-0.46	-0.03	B<	16.84	-0.25	-0.02	B<	91.72	-0.98	-0.07	B<	8.21	-0.59	-0.02	B<
9	28.70	0.22	0.02	B>	3.03	0.16	0.01	A	0.00	0.00	0.00	A	2.32	0.14	0.01	A	17.24	0.61	0.04	B>
10	2.63	-0.07	-0.01	A	41.24	-0.59	-0.05	B<	165.55	-0.60	-0.05	B<	5.44	-0.21	-0.02	A	2.52	-0.22	-0.01	A
11	3.82	0.10	0.01	A	48.81	0.73	0.05	B>	151.56	0.68	0.05	B>	35.68	0.58	0.04	B>	2.20	0.28	0.01	A
12	20.77	0.28	0.01	B>	1.76	-0.17	-0.01	A	25.11	-0.35	-0.02	B<	0.16	-0.05	0.00	A	0.00	-0.02	0.00	A
13	97.87	0.45	0.03	B>	6.88	0.26	0.02	B>	79.18	0.46	0.03	B>	0.14	0.04	0.00	A	6.07	0.44	0.02	A
14	147.20	-0.53	-0.04	B<	26.60	-0.48	-0.04	B<	4.07	-0.10	-0.01	A	42.74	0.60	0.05	B>	0.61	0.13	0.01	A
15	9.48	-0.13	-0.01	B<	2.06	-0.13	-0.01	A	39.64	-0.30	-0.03	B<	5.71	-0.21	-0.02	A	2.83	-0.23	-0.02	A
16	165.08	0.81	0.03	B>	0.25	0.07	0.00	A	9.92	-0.23	-0.01	B<	3.61	0.23	0.01	A	5.36	-0.58	-0.01	A
17	198.08	-0.69	-0.04	B<	111.84	-1.04	-0.07	B<	214.77	-0.82	-0.05	B<	24.20	-0.47	-0.03	B<	74.61	-1.38	-0.06	B<
18	204.38	0.57	0.05	B>	6.95	0.24	0.02	B>	20.13	0.21	0.01	B>	3.81	0.17	0.01	A	43.30	0.93	0.06	B>
19	37.20	0.23	0.02	B>	0.00	0.00	0.00	A	129.37	-0.50	-0.05	B<	65.84	-0.69	-0.07	B<	2.65	-0.19	-0.02	A
20	12.36	0.14	0.01	B>	0.00	0.01	0.00	A	0.52	0.03	0.00	A	12.44	0.30	0.03	B>	7.51	0.40	0.03	B>
21	89.75	0.64	0.02	B>	0.45	0.10	0.00	A	0.13	-0.03	0.00	A	2.13	-0.18	-0.01	A	2.86	-0.46	-0.01	A
22	5.20	0.12	0.01	A	13.72	0.42	0.03	B>	10.07	0.20	0.01	B>	4.71	0.23	0.01	A	4.41	0.48	0.01	A
23	16.46	-0.18	-0.01	B<	1.38	0.11	0.01	A	7.22	0.13	0.01	B>	0.19	-0.04	-0.01	A	5.45	0.37	0.02	A
24	191.12	0.63	0.04	B>	0.15	-0.04	0.00	A	17.79	0.22	0.02	B>	0.00	-0.01	0.00	A	0.75	-0.14	-0.01	A
25	0.00	0.00	0.00	A	2.26	0.13	0.01	A	17.95	0.20	0.02	B>	14.02	0.32	0.03	B>	4.16	0.28	0.02	A
26	2.56	0.13	0.00	A	6.26	-0.38	-0.01	A	23.43	0.44	0.01	B>	101.88	1.80	0.05	C>	0.98	-0.33	0.00	A
27	74.12	-0.51	-0.02	B<	17.36	-0.49	-0.03	B<	16.49	-0.27	-0.01	B<	0.32	0.07	0.00	A	14.85	-0.88	-0.02	B<
28	280.40	0.77	0.05	B>	14.79	0.39	0.03	B>	21.11	0.24	0.01	B>	0.36	-0.06	-0.01	A	12.00	0.58	0.03	B>
29	6.65	-0.14	-0.01	B<	5.21	0.26	0.02	A	18.80	0.27	0.02	B>	1.46	0.13	0.01	A	5.26	0.55	0.01	A
30	86.27	0.46	0.03	B>	2.61	-0.17	-0.01	A	51.68	-0.40	-0.03	B<	58.60	-0.74	-0.06	B<	1.10	-0.21	-0.01	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

**Table 9.2.1.8 (continued)****2007 Spring AIMS Differential Item Functioning Mathematics CRT High School**

Item	Reference: Male N = 34601				Reference: White N = 34719				Reference: White N = 34719				Reference: White N = 34719				Reference: White N = 34719			
	Focal: Female N = 33879				Focal: African Am. N = 3812				Focal: Hispanic N = 23835				Focal: Native Am. N = 4191				Focal: Asian N = 1953			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
31	67.46	0.42	0.02	B>	18.85	0.48	0.03	B>	30.92	0.32	0.02	B>	0.02	-0.02	0.00	A	10.19	0.64	0.02	B>
32	82.07	0.42	0.03	B>	10.03	0.32	0.02	B>	127.25	0.60	0.05	B>	66.40	0.78	0.06	B>	13.60	0.64	0.03	B>
33	613.10	-1.00	-0.09	B<	34.92	-0.53	-0.05	B<	39.00	-0.29	-0.03	B<	0.21	0.04	0.00	A	4.00	-0.27	-0.02	A
34	110.29	0.53	0.03	B>	0.46	-0.07	0.00	A	9.99	-0.18	-0.01	B<	37.24	-0.59	-0.04	B<	3.23	0.39	0.01	A
35	0.01	0.01	0.00	A	18.27	0.44	0.03	B>	0.02	0.01	0.00	A	15.20	-0.37	-0.03	B<	0.46	-0.12	-0.01	A
36	1.36	0.05	0.01	A	3.41	0.17	0.01	A	19.83	0.21	0.02	B>	0.00	0.00	0.00	A	27.39	0.75	0.05	B>
37	98.27	-0.41	-0.03	B<	40.92	-0.57	-0.05	B<	36.91	-0.28	-0.03	B<	101.38	-0.86	-0.08	B<	0.01	0.02	0.00	A
38	395.96	-0.86	-0.07	B<	79.50	-0.83	-0.07	B<	131.06	-0.56	-0.04	B<	3.89	-0.18	-0.02	A	34.76	-0.90	-0.05	B<
39	269.32	0.77	0.05	B>	23.03	0.51	0.03	B>	21.92	0.25	0.01	B>	3.38	0.18	0.01	A	11.32	-0.53	-0.03	B<
40	52.02	0.30	0.03	B>	0.00	0.01	0.00	A	5.24	0.11	0.01	A	26.62	-0.46	-0.04	B<	4.98	0.30	0.02	A
41	5.33	0.09	0.01	A	7.29	-0.24	-0.02	B<	1.33	0.05	0.00	A	10.22	0.28	0.02	B>	1.89	-0.19	-0.01	A
42	151.83	0.54	0.04	B>	0.02	0.01	0.00	A	8.29	-0.15	-0.01	B<	5.92	-0.22	-0.02	A	0.08	0.05	0.00	A
43	8.08	-0.13	-0.01	B<	1.95	-0.14	-0.01	A	0.04	0.01	0.00	A	0.30	0.05	0.00	A	0.33	0.11	0.00	A
44	58.97	0.31	0.03	B>	7.48	0.24	0.02	B>	58.70	0.35	0.03	B>	10.61	0.28	0.02	B>	8.40	0.38	0.03	B>
45	68.67	-0.34	-0.03	B<	0.05	0.02	0.00	A	12.93	-0.17	-0.01	B<	0.32	-0.05	0.00	A	1.91	0.20	0.01	A
46	337.52	0.80	0.06	B>	10.01	0.31	0.02	B>	3.22	0.09	0.01	A	0.73	0.08	0.01	A	1.85	-0.20	-0.01	A
47	6.75	-0.13	-0.01	B<	12.89	0.38	0.03	B>	42.62	0.38	0.03	B>	0.00	0.00	0.00	A	2.57	0.33	0.01	A
48	171.31	0.51	0.05	B>	4.96	0.20	0.02	A	71.79	0.38	0.03	B>	22.64	0.41	0.04	B>	0.52	0.09	0.01	A
49	71.44	-0.39	-0.03	B<	9.17	-0.30	-0.02	B<	320.83	-0.94	-0.07	B<	127.35	-1.02	-0.08	B<	54.75	-1.18	-0.05	B<
50	17.73	-0.21	-0.01	B<	1.64	-0.13	-0.01	A	0.31	0.03	0.00	A	3.15	-0.18	-0.01	A	20.03	-0.77	-0.03	B<
51	0.48	0.03	0.00	A	3.35	-0.17	-0.01	A	4.73	0.11	0.01	A	17.26	0.39	0.03	B>	6.53	-0.43	-0.02	A
52	94.97	-0.40	-0.03	B<	23.98	-0.44	-0.04	B<	0.36	0.03	0.00	A	2.42	0.14	0.01	A	16.95	-0.56	-0.04	B<
53	54.56	0.29	0.03	B>	0.13	-0.03	0.00	A	0.33	0.03	0.01	A	1.44	-0.11	-0.01	A	2.07	-0.19	-0.01	A
54	1.53	-0.06	0.00	A	7.14	-0.27	-0.02	B<	3.14	-0.10	-0.01	A	27.67	-0.48	-0.04	B<	9.37	-0.52	-0.02	B<
55	7.41	-0.11	-0.01	B<	3.35	0.17	0.01	A	0.34	-0.03	0.00	A	0.62	0.07	0.00	A	5.94	0.32	0.02	A
56	121.99	0.51	0.03	B>	16.72	0.43	0.03	B>	18.64	0.23	0.01	B>	9.17	0.31	0.02	B>	26.78	0.83	0.04	B>
57	15.48	0.21	0.01	B>	0.16	-0.05	0.00	A	28.79	0.33	0.02	B>	1.28	0.12	0.01	A	2.73	-0.34	-0.01	A
58	17.70	0.22	0.01	B>	9.80	-0.34	-0.02	B<	17.57	-0.26	-0.02	B<	40.21	0.71	0.04	B>	2.36	-0.31	-0.01	A
59	15.81	0.16	0.01	B>	39.13	0.56	0.05	B>	115.60	0.50	0.04	B>	5.72	0.21	0.02	A	12.28	0.49	0.03	B>
60	268.85	-0.63	-0.06	B<	0.49	0.06	0.01	A	18.67	-0.19	-0.02	B<	1.32	-0.10	-0.01	A	0.00	0.01	0.00	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

**Table 9.2.1.8 (continued)**  
**2007 Spring AIMS Differential Item Functioning Mathematics CRT High School**

Item	Reference: Male N = 34601 Focal: Female N = 33879				Reference: White N = 34719 Focal: African Am. N = 3812				Reference: White N = 34719 Focal: Hispanic N = 23835				Reference: White N = 34719 Focal: Native Am. N = 4191				Reference: White N = 34719 Focal: Asian N = 1953			
	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag
	61	155.88	0.54	0.04	B>	13.39	0.35	0.03	B>	5.17	-0.11	-0.01	A	4.89	-0.20	-0.01	A	14.64	-0.54	-0.03
62	73.02	-0.34	-0.03	B<	11.98	-0.31	-0.03	B<	255.79	-0.72	-0.06	B<	52.60	-0.65	-0.06	B<	25.40	-0.61	-0.05	B<
63	96.32	-0.39	-0.03	B<	55.61	0.68	0.06	B>	68.46	0.39	0.03	B>	10.17	0.29	0.02	B>	5.96	0.30	0.03	A
64	2.40	-0.06	0.00	A	0.73	0.08	0.01	A	11.83	-0.16	-0.02	B<	24.43	-0.43	-0.04	B<	1.58	-0.16	-0.01	A
65	4.65	0.09	0.01	A	14.09	0.34	0.03	B>	38.27	0.29	0.03	B>	7.52	0.24	0.02	B>	21.43	0.69	0.04	B>
66	68.03	0.35	0.03	B>	22.48	0.44	0.04	B>	12.14	0.17	0.02	B>	1.32	0.10	0.01	A	16.42	0.62	0.04	B>
67	66.01	0.32	0.03	B>	14.52	0.34	0.03	B>	23.72	0.22	0.02	B>	6.69	0.23	0.02	B>	23.96	0.68	0.05	B>
68	11.11	-0.13	-0.01	B<	0.00	0.00	0.00	A	2.52	0.07	0.02	A	23.55	0.41	0.04	B>	16.60	-0.53	-0.04	B<
69	11.91	-0.14	-0.01	B<	51.39	0.65	0.05	B>	2.00	0.07	0.00	A	0.49	0.07	0.00	A	0.84	0.12	0.01	A
70	2.35	-0.09	0.00	A	5.01	-0.26	-0.01	A	38.17	-0.39	-0.02	B<	2.37	-0.17	-0.01	A	8.72	-0.61	-0.02	B<
71	57.93	-0.30	-0.03	B<	4.12	-0.18	-0.02	A	125.60	-0.51	-0.04	B<	98.52	-0.85	-0.08	B<	27.28	-0.65	-0.05	B<
72	0.03	-0.01	0.00	A	19.45	-0.46	-0.03	B<	95.30	-0.56	-0.03	B<	1.93	-0.14	-0.01	A	13.57	-0.68	-0.02	B<
73	13.76	-0.24	-0.01	B<	0.61	-0.11	0.00	A	0.17	0.03	0.00	A	0.28	0.07	0.01	A	13.24	-0.91	-0.02	B<
74	294.00	-0.75	-0.06	B<	39.63	-0.59	-0.05	B<	17.27	-0.21	-0.02	B<	1.60	0.12	0.01	A	13.53	-0.53	-0.03	B<
75	585.62	-1.05	-0.08	B<	41.07	-0.58	-0.05	B<	193.20	-0.67	-0.05	B<	61.73	-0.69	-0.06	B<	70.59	-1.18	-0.07	B<
76	175.12	0.65	0.04	B>	40.00	0.67	0.04	B>	68.45	0.46	0.03	B>	0.85	-0.09	-0.01	A	25.72	1.06	0.03	B>
77	72.30	0.36	0.03	B>	4.43	-0.20	-0.02	A	57.47	0.37	0.03	B>	165.40	1.17	0.10	B>	7.80	0.43	0.02	B>
78	13.67	-0.15	-0.01	B<	28.00	0.47	0.04	B>	70.04	0.38	0.04	B>	4.56	0.18	0.02	A	0.65	0.11	0.01	A
79	26.31	-0.26	-0.01	B<	32.21	-0.60	-0.04	B<	156.35	-0.70	-0.05	B<	113.22	-1.04	-0.07	B<	17.89	-0.79	-0.03	B<
80	5.31	0.12	0.01	A	11.98	-0.36	-0.02	B<	0.49	-0.04	0.00	A	37.60	0.65	0.04	B>	0.18	-0.09	0.00	A
81	117.77	-0.42	-0.04	B<	2.95	-0.15	-0.02	A	2.18	0.07	0.00	A	17.89	-0.37	-0.03	B<	4.98	0.28	0.02	A
82	130.68	-0.45	-0.04	B<	14.25	-0.32	-0.03	B<	11.83	-0.16	-0.01	B<	13.47	0.32	0.03	B>	11.18	-0.43	-0.03	B<
83	3.91	0.08	0.01	A	41.41	0.59	0.05	B>	59.25	0.36	0.03	B>	38.76	0.54	0.05	B>	10.75	0.49	0.03	B>
84	154.24	0.75	0.03	B>	4.22	0.26	0.01	A	38.82	0.43	0.02	B>	34.91	0.70	0.04	B>	3.98	0.51	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta MH$  = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

**Table 9.2.1.9**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 3**

Item	Reference: Male N = 41199 Focal: Female N = 39501				Reference: White N = 34820 Focal: African Am. N = 4504				Reference: White N = 34820 Focal: Hispanic N = 35105				Reference: White N = 34820 Focal: Native Am. N = 4084				Reference: White N = 34820 Focal: Asian N = 2258			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	26.26	0.40	0.01	B>	14.11	-0.60	-0.02	B<	6.62	0.24	0.01	A	0.11	-0.06	0.00	A	2.57	0.56	0.01
2	25.21	0.26	0.01	B>	0.28	0.06	0.00	A	11.20	-0.20	-0.01	B<	3.25	-0.20	-0.01	A	5.85	-0.43	-0.01	A
3	24.20	0.40	0.01	B>	0.79	-0.16	0.00	A	0.23	-0.05	0.00	A	9.78	0.56	0.01	B>	0.33	0.20	0.00	A
4	18.08	0.20	0.01	B>	21.27	-0.46	-0.03	B<	0.81	-0.05	-0.01	A	65.26	-0.78	-0.06	B<	5.04	-0.36	-0.02	A
5	0.24	0.02	0.00	A	4.13	-0.19	-0.01	A	21.73	-0.23	-0.01	B<	17.29	-0.39	-0.03	B<	36.32	-0.86	-0.04	B<
6	0.01	0.00	0.00	A	0.01	-0.01	0.00	A	20.23	0.19	0.02	B>	31.97	-0.48	-0.04	B<	16.24	-0.49	-0.04	B<
7	8.19	-0.14	-0.01	B<	9.31	-0.33	-0.02	B<	92.67	-0.56	-0.03	B<	8.01	-0.31	-0.02	B<	0.12	-0.07	0.00	A
8	2.29	0.06	0.00	A	17.03	-0.37	-0.03	B<	4.03	0.09	0.00	A	0.83	-0.09	-0.01	A	0.25	-0.07	0.00	A
9	51.53	0.34	0.02	B>	3.15	-0.18	-0.01	A	7.17	-0.15	-0.01	B<	3.56	-0.19	-0.01	A	1.26	-0.20	-0.01	A
10	9.37	0.12	0.01	B>	23.20	-0.41	-0.03	B<	3.33	-0.08	0.00	A	22.04	-0.41	-0.03	B<	7.46	-0.33	-0.02	B<
11	41.88	0.41	0.01	B>	11.82	0.48	0.02	B>	53.29	0.55	0.02	B>	1.93	0.19	0.01	A	0.11	0.09	0.00	A
12	0.00	0.00	0.00	A	0.76	-0.11	-0.01	A	1.49	-0.08	-0.01	A	0.19	-0.05	0.00	A	0.93	0.21	0.01	A
13	191.52	-0.55	-0.04	B<	3.48	0.16	0.01	A	0.07	-0.01	-0.01	A	0.82	0.08	0.00	A	0.44	-0.09	-0.01	A
14	100.30	0.40	0.03	B>	1.89	0.12	0.01	A	105.90	0.47	0.04	B>	0.95	0.09	0.01	A	11.76	0.46	0.03	B>
15	78.19	-0.34	-0.03	B<	0.95	-0.09	-0.01	A	0.42	0.03	0.00	A	9.55	-0.29	-0.02	B<	4.13	0.24	0.02	A
16	39.44	0.25	0.02	B>	1.15	-0.10	-0.01	A	37.54	-0.28	-0.01	B<	0.00	0.00	0.00	A	2.13	0.17	0.01	A
17	0.01	0.00	0.00	A	0.12	-0.03	0.00	A	2.27	-0.07	-0.01	A	0.02	-0.01	0.00	A	0.02	0.02	0.00	A
18	72.03	0.31	0.03	B>	12.61	0.30	0.02	B>	124.73	0.46	0.02	B>	73.17	0.78	0.06	B>	8.99	-0.32	-0.03	B<
19	3.45	0.08	0.00	A	14.60	0.37	0.03	B>	34.45	0.29	0.02	B>	19.47	0.44	0.03	B>	4.11	0.31	0.02	A
20	20.87	0.17	0.02	B>	7.06	0.23	0.02	B>	62.21	-0.33	-0.03	B<	20.53	-0.40	-0.04	B<	1.94	-0.17	-0.01	A
21	9.00	0.12	0.01	B>	3.58	0.17	0.01	A	5.28	0.10	0.01	A	1.49	0.11	0.01	A	0.02	0.02	0.00	A
22	125.97	-0.57	-0.03	B<	10.03	-0.35	-0.02	B<	90.89	-0.56	-0.03	B<	55.74	-0.79	-0.05	B<	10.65	-0.57	-0.02	B<
23	132.45	0.40	0.04	B>	0.80	0.07	0.01	A	4.54	0.09	0.01	A	28.28	0.46	0.04	B>	2.64	-0.18	-0.02	A
24	0.00	0.00	0.00	A	20.92	0.49	0.03	B>	111.59	0.59	0.03	B>	46.17	0.73	0.05	B>	61.77	1.56	0.05	C>
25	14.71	0.14	0.01	B>	0.34	0.05	0.01	A	53.73	0.30	0.03	B>	13.33	0.32	0.03	B>	0.63	0.09	0.01	A
26	50.61	0.29	0.02	B>	8.83	0.27	0.02	B>	17.37	0.19	0.01	B>	2.02	0.14	0.01	A	4.26	0.29	0.02	A
27	0.44	0.03	0.00	A	9.34	0.30	0.02	B>	2.79	-0.08	0.00	A	28.50	0.54	0.04	B>	5.99	0.40	0.02	A
28	62.80	-0.31	-0.02	B<	0.77	-0.08	-0.01	A	5.86	0.11	0.01	A	6.20	0.23	0.02	A	0.40	0.08	0.01	A
29	40.49	-0.34	-0.01	B<	8.15	0.33	0.02	B>	41.63	0.39	0.02	B>	7.36	0.31	0.02	B>	1.34	0.23	0.01	A
30	68.72	-0.31	-0.03	B<	1.62	-0.11	-0.01	A	56.99	0.32	0.03	B>	0.66	-0.07	-0.01	A	5.30	0.28	0.02	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.9 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 3**

Item	Reference: Male N = 41199 Focal: Female N = 39501				Reference: White N = 34820 Focal: African Am. N = 4504				Reference: White N = 34820 Focal: Hispanic N = 35105				Reference: White N = 34820 Focal: Native Am. N = 4084				Reference: White N = 34820 Focal: Asian N = 2258			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	28.96	0.21	0.02	B>	1.75	-0.12	-0.01	A	27.27	-0.23	-0.02	B<	53.08	0.68	0.05	B>	2.39	0.20	0.01
32	65.48	-0.38	-0.02	B<	5.43	-0.23	-0.01	A	0.80	0.05	0.01	A	192.25	1.58	0.10	C>	5.16	0.40	0.02	A
33	314.56	-0.81	-0.05	B<	13.89	-0.38	-0.02	B<	866.09	-1.51	-0.10	C<	137.65	-1.16	-0.08	B<	13.38	-0.59	-0.02	B<
34	12.32	0.15	0.01	B>	11.14	-0.32	-0.02	B<	1.86	-0.07	0.00	A	67.62	0.83	0.06	B>	1.17	0.18	0.01	A
35	28.40	0.40	0.01	B>	2.07	0.23	0.01	A	12.41	0.31	0.01	B>	1.43	0.19	0.01	A	0.02	-0.06	0.00	A
36	0.64	-0.04	0.00	A	0.38	-0.07	0.00	A	135.23	-0.64	-0.04	B<	27.15	-0.54	-0.04	B<	4.02	-0.35	-0.01	A
37	3.39	0.07	0.01	A	9.82	0.27	0.02	B>	24.63	-0.22	-0.02	B<	10.84	-0.29	-0.03	B<	27.14	-0.60	-0.05	B<
38	69.43	0.40	0.02	B>	6.14	0.26	0.02	A	17.99	0.24	0.01	B>	19.60	-0.45	-0.03	B<	3.29	0.32	0.01	A
39	0.17	-0.02	0.00	A	2.73	0.21	0.01	A	9.27	0.20	0.01	B>	2.04	-0.17	-0.01	A	3.41	0.42	0.01	A
40	0.20	-0.02	0.00	A	0.00	0.00	0.00	A	0.85	0.04	0.00	A	13.23	-0.33	-0.03	B<	5.96	0.34	0.02	A
41	23.55	0.18	0.02	B>	3.40	0.16	0.01	A	18.41	-0.18	-0.01	B<	27.88	-0.49	-0.04	B<	10.53	-0.37	-0.03	B<
42	114.68	0.43	0.03	B>	19.89	0.41	0.03	B>	64.93	0.37	0.03	B>	7.58	0.27	0.02	B>	0.09	0.04	0.00	A
43	193.39	0.52	0.04	B>	24.19	0.42	0.04	B>	130.17	0.49	0.05	B>	90.88	0.84	0.08	B>	3.38	0.23	0.02	A
44	96.74	-0.43	-0.03	B<	3.66	-0.18	-0.01	A	79.60	-0.44	-0.02	B<	22.45	-0.44	-0.03	B<	21.17	-0.68	-0.03	B<
45	131.77	-0.47	-0.03	B<	59.03	-0.68	-0.05	B<	62.74	-0.37	-0.03	B<	58.16	0.77	0.06	B>	44.54	-0.84	-0.05	B<
46	26.78	-0.19	-0.02	B<	2.50	-0.13	-0.01	A	3.34	0.08	0.00	A	12.28	0.30	0.03	B>	28.06	0.59	0.05	B>
47	293.44	-0.64	-0.06	B<	0.12	-0.03	0.00	A	0.10	0.01	0.00	A	40.63	-0.56	-0.05	B<	3.97	-0.24	-0.02	A
48	15.02	-0.16	-0.01	B<	5.44	-0.21	-0.02	A	14.35	0.17	0.01	B>	0.29	0.05	0.00	A	4.36	0.27	0.02	A
49	88.56	-0.37	-0.03	B<	2.37	0.14	0.01	A	5.35	-0.10	-0.01	A	39.82	-0.57	-0.05	B<	13.40	-0.46	-0.03	B<
50	90.14	-0.38	-0.03	B<	15.14	0.34	0.03	B>	56.98	0.34	0.04	B>	31.29	0.51	0.04	B>	37.13	0.83	0.05	B>
51	65.85	-0.36	-0.02	B<	4.15	-0.20	-0.01	A	122.27	-0.55	-0.03	B<	37.49	-0.60	-0.04	B<	2.86	0.28	0.01	A
52	212.50	0.62	0.04	B>	3.00	0.17	0.01	A	0.11	-0.02	0.00	A	2.95	0.17	0.01	A	3.74	0.28	0.02	A
53	25.44	0.21	0.01	B>	9.03	-0.27	-0.02	B<	2.43	0.07	0.01	A	35.36	-0.54	-0.05	B<	0.68	0.12	0.01	A
54	16.14	-0.22	-0.01	B<	0.03	0.02	0.00	A	1.56	-0.08	0.00	A	0.04	0.02	0.00	A	0.37	0.14	0.00	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.10**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 4**

Item	Reference: Male N = 41001 Focal: Female N = 39202				Reference: White N = 35018 Focal: African Am. N = 4331				Reference: White N = 35018 Focal: Hispanic N = 34782				Reference: White N = 35018 Focal: Native Am. N = 3940				Reference: White N = 35018 Focal: Asian N = 2186			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	1	22.07	-0.26	-0.01	B<	0.06	-0.03	0.00	A	15.52	-0.25	-0.02	B<	31.78	-0.66	-0.04	B<	3.14	-0.36	-0.01
2	0.21	-0.02	0.00	A	7.86	0.25	0.02	B>	172.13	0.59	0.05	B>	45.19	0.62	0.05	B>	17.33	0.58	0.04	B>
3	94.86	-0.40	-0.03	B<	1.72	0.12	0.01	A	2.10	0.07	0.01	A	30.21	-0.51	-0.04	B<	11.85	0.52	0.03	B>
4	9.79	-0.11	-0.01	B<	1.92	-0.12	-0.01	A	233.57	0.63	0.06	B>	45.40	-0.59	-0.06	B<	5.05	-0.27	-0.02	A
5	47.09	-0.34	-0.02	B<	11.20	0.37	0.02	B>	62.63	0.45	0.02	B>	19.60	0.48	0.03	B>	3.85	0.39	0.01	A
6	51.77	0.28	0.02	B>	1.30	0.10	0.01	A	0.01	0.00	0.00	A	1.95	-0.13	-0.01	A	1.06	0.14	0.01	A
7	0.03	-0.01	0.00	A	0.62	0.08	0.01	A	0.04	0.01	0.01	A	11.61	-0.33	-0.03	B<	0.45	0.10	0.01	A
8	35.47	-0.33	-0.01	B<	5.04	-0.27	-0.01	A	1.43	0.08	0.00	A	0.10	0.04	0.00	A	0.10	-0.08	0.00	A
9	16.81	-0.16	-0.01	B<	2.39	0.15	0.01	A	15.29	0.18	0.01	B>	5.43	-0.24	-0.02	A	0.28	0.07	0.01	A
10	213.66	-0.52	-0.05	B<	0.16	-0.03	0.00	A	46.63	-0.28	-0.03	B<	47.13	-0.58	-0.06	B<	32.77	-0.63	-0.06	B<
11	45.84	-0.32	-0.02	B<	22.96	-0.49	-0.03	B<	217.10	-0.81	-0.05	B<	30.21	-0.57	-0.04	B<	4.81	-0.39	-0.01	A
12	49.82	-0.31	-0.02	B<	9.57	-0.30	-0.02	B<	2.50	-0.08	-0.01	A	30.45	-0.53	-0.04	B<	0.11	0.05	0.00	A
13	282.17	0.69	0.05	B>	7.47	0.26	0.02	B>	4.44	-0.10	-0.01	A	7.71	0.27	0.02	B>	15.24	0.59	0.03	B>
14	58.95	-0.28	-0.02	B<	0.06	0.02	0.00	A	4.47	0.09	0.00	A	0.00	0.00	0.00	A	12.05	0.41	0.03	B>
15	1.58	-0.06	0.00	A	0.75	-0.09	-0.01	A	0.02	0.01	0.00	A	27.50	-0.52	-0.04	B<	0.00	-0.01	0.00	A
16	96.93	0.43	0.03	B>	11.00	0.34	0.02	B>	0.20	0.02	0.00	A	25.55	-0.48	-0.04	B<	1.44	-0.18	-0.01	A
17	25.96	0.35	0.01	B>	2.05	-0.20	-0.01	A	4.50	0.17	0.01	A	5.08	-0.33	-0.01	A	1.70	0.39	0.01	A
18	209.71	-0.55	-0.05	B<	3.54	0.16	0.01	A	113.74	-0.45	-0.04	B<	34.71	-0.53	-0.05	B<	0.40	0.08	0.01	A
19	97.52	0.44	0.03	B>	0.00	0.01	0.00	A	7.26	-0.14	-0.01	B<	0.08	0.03	0.00	A	5.25	-0.36	-0.02	A
20	84.41	0.51	0.02	B>	15.35	0.48	0.02	B>	11.11	0.21	0.01	B>	14.78	0.47	0.02	B>	1.16	-0.22	-0.01	A
21	1.14	0.05	0.00	A	1.04	-0.11	-0.01	A	412.75	-1.10	-0.07	B<	222.33	-1.45	-0.10	B<	28.55	-0.88	-0.03	B<
22	299.60	0.65	0.06	B>	0.60	0.07	0.01	A	123.36	-0.47	-0.05	B<	58.42	-0.68	-0.06	B<	48.08	-0.82	-0.07	B<
23	83.47	0.37	0.03	B>	21.26	0.42	0.03	B>	4.06	0.09	0.00	A	0.77	-0.08	-0.01	A	6.87	0.36	0.02	B>
24	0.02	0.01	0.00	A	0.83	-0.09	0.00	A	291.29	-0.84	-0.05	B<	67.26	-0.79	-0.06	B<	40.97	-0.90	-0.05	B<
25	69.44	0.31	0.03	B>	1.73	0.11	0.01	A	125.68	0.47	0.04	B>	26.08	0.46	0.04	B>	3.27	-0.21	-0.02	A
26	11.26	0.18	0.01	B>	6.34	0.31	0.01	A	13.27	0.23	0.02	B>	6.13	0.29	0.02	A	5.87	0.53	0.01	A
27	61.97	0.39	0.02	B>	8.29	0.31	0.02	B>	95.06	0.56	0.03	B>	52.17	0.80	0.05	B>	0.01	-0.02	0.00	A
28	52.72	0.36	0.02	B>	1.03	0.11	0.01	A	119.56	0.61	0.03	B>	125.45	1.23	0.08	B>	7.53	0.52	0.02	B>
29	41.78	0.28	0.02	B>	2.68	0.16	0.01	A	0.12	-0.02	0.00	A	2.22	0.14	0.01	A	2.85	0.27	0.01	A
30	57.44	0.33	0.02	B>	3.25	0.18	0.01	A	148.60	0.60	0.05	B>	83.26	0.92	0.07	B>	17.34	0.64	0.03	B>

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.10 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 4**

Item	Reference: Male N = 41001 Focal: Female N = 39202				Reference: White N = 35018 Focal: African Am. N = 4331				Reference: White N = 35018 Focal: Hispanic N = 34782				Reference: White N = 35018 Focal: Native Am. N = 3940				Reference: White N = 35018 Focal: Asian N = 2186			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	70.84	0.47	0.02	B>	4.74	0.26	0.01	A	86.74	0.60	0.03	B>	56.58	0.90	0.05	B>	3.37	0.42	0.01
32	510.75	1.08	0.05	B>	15.51	0.42	0.02	B>	93.99	0.53	0.03	B>	18.08	0.45	0.03	B>	0.01	0.02	0.00	A
33	54.66	0.33	0.02	B>	0.21	0.05	0.00	A	55.56	0.38	0.03	B>	71.48	0.89	0.06	B>	0.02	0.02	0.00	A
34	0.25	0.02	0.00	A	0.01	-0.01	0.00	A	21.32	0.24	0.02	B>	69.92	0.88	0.06	B>	1.06	0.18	0.01	A
35	15.74	0.17	0.01	B>	8.21	-0.28	-0.02	B<	38.19	-0.30	-0.02	B<	90.98	0.95	0.07	B>	1.32	-0.17	-0.01	A
36	14.72	-0.19	-0.01	B<	0.00	0.00	0.00	A	2.68	-0.09	0.00	A	33.21	-0.59	-0.04	B<	0.06	-0.05	0.00	A
37	247.49	-0.63	-0.05	B<	27.57	-0.47	-0.04	B<	248.85	-0.71	-0.05	B<	64.17	-0.73	-0.06	B<	6.74	-0.35	-0.02	B<
38	269.18	-0.75	-0.04	B<	23.63	-0.49	-0.03	B<	496.54	-1.17	-0.08	B<	112.18	-1.03	-0.08	B<	4.71	-0.38	-0.01	A
39	244.26	-0.65	-0.04	B<	8.80	-0.27	-0.02	B<	11.31	-0.16	-0.01	B<	7.44	-0.26	-0.02	B<	9.25	0.44	0.03	B>
40	292.98	-0.75	-0.05	B<	46.48	-0.65	-0.05	B<	148.00	-0.60	-0.04	B<	69.48	-0.79	-0.06	B<	8.71	-0.45	-0.02	B<
41	19.34	0.19	0.01	B>	10.65	0.32	0.02	B>	29.06	0.26	0.02	B>	9.86	0.30	0.02	B>	29.82	0.88	0.04	B>
42	212.83	0.60	0.04	B>	0.22	-0.05	-0.01	A	0.72	0.04	0.00	A	31.66	0.55	0.04	B>	2.15	0.21	0.01	A
43	11.94	0.14	0.01	B>	5.45	-0.21	-0.02	A	49.86	0.33	0.02	B>	99.06	0.97	0.08	B>	0.37	-0.09	-0.01	A
44	4.39	-0.09	-0.01	A	0.04	0.02	0.00	A	73.52	0.42	0.03	B>	12.22	0.34	0.03	B>	19.50	0.70	0.03	B>
45	5.88	-0.11	0.00	A	5.80	-0.24	-0.02	A	70.83	-0.43	-0.03	B<	10.56	-0.33	-0.03	B<	6.21	-0.39	-0.02	A
46	66.58	0.33	0.02	B>	5.16	-0.21	-0.02	A	4.39	-0.10	-0.01	A	21.84	0.44	0.04	B>	2.90	-0.23	-0.01	A
47	30.86	-0.20	-0.02	B<	4.35	0.18	0.01	A	29.29	0.23	0.02	B>	9.25	-0.28	-0.02	B<	9.41	-0.35	-0.03	B<
48	49.95	-0.30	-0.02	B<	25.21	-0.47	-0.04	B<	29.31	-0.26	-0.02	B<	27.79	-0.48	-0.04	B<	1.58	-0.18	-0.01	A
49	3.21	0.11	0.00	A	0.05	-0.03	0.00	A	176.27	0.92	0.04	B>	58.05	1.00	0.05	B>	16.72	1.05	0.02	B>
50	47.95	-0.35	-0.02	B<	2.17	-0.17	-0.01	A	3.11	-0.10	0.00	A	0.88	0.11	0.01	A	2.45	-0.27	-0.01	A
51	4.93	-0.14	0.00	A	0.53	-0.10	0.00	A	20.56	0.34	0.01	B>	22.90	0.67	0.03	B>	3.02	0.48	0.01	A
52	155.33	-0.77	-0.02	B<	2.54	0.22	0.01	A	9.86	-0.23	-0.01	B<	21.52	0.64	0.03	B>	2.28	0.39	0.01	A
53	4.59	-0.10	0.00	A	0.00	0.01	0.00	A	0.37	0.03	0.00	A	26.22	0.54	0.04	B>	0.10	0.06	0.00	A
54	1.16	-0.08	0.00	A	0.07	0.04	0.00	A	12.87	0.30	0.01	B>	19.00	0.69	0.02	B>	7.29	0.89	0.01	B>

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.11**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 5**

Item	Reference: Male N = 41013 Focal: Female N = 39764				Reference: White N = 36098 Focal: African Am. N = 4427				Reference: White N = 36098 Focal: Hispanic N = 33937				Reference: White N = 36098 Focal: Native Am. N = 4126				Reference: White N = 36098 Focal: Asian N = 2222			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	9.55	0.14	0.01	B>	35.74	-0.61	-0.04	B<	534.84	-1.20	-0.08	B<	174.70	-1.26	-0.09	B<	31.18	-0.86	-0.04	B<
2	48.52	0.49	0.01	B>	27.12	-0.77	-0.02	B<	109.78	-0.88	-0.03	B<	3.84	0.33	0.01	A	16.61	-1.06	-0.02	B<
3	65.82	-0.40	-0.02	B<	1.75	-0.14	-0.01	A	24.20	-0.28	-0.02	B<	40.36	-0.65	-0.04	B<	0.23	-0.10	0.00	A
4	11.44	-0.12	-0.01	B<	3.74	-0.15	-0.02	A	0.08	-0.01	-0.01	A	13.87	0.32	0.03	B>	2.08	0.16	0.02	A
5	5.39	-0.12	0.00	A	0.82	-0.11	-0.01	A	58.23	-0.48	-0.03	B<	0.09	0.04	0.00	A	21.33	-0.88	-0.03	B<
6	7.39	-0.10	-0.01	B<	4.44	-0.18	-0.02	A	9.18	0.13	0.00	B>	0.04	0.02	0.00	A	6.07	0.32	0.02	A
7	43.08	-0.32	-0.02	B<	0.03	-0.02	0.00	A	21.41	0.26	0.02	B>	0.02	-0.02	0.00	A	4.32	0.38	0.01	A
8	190.29	0.57	0.04	B>	0.26	-0.05	0.00	A	84.10	0.44	0.03	B>	2.95	-0.16	-0.02	A	0.10	0.05	0.00	A
9	1.92	0.05	0.00	A	30.56	-0.46	-0.04	B<	56.35	-0.32	-0.02	B<	0.91	0.08	0.01	A	0.08	-0.04	0.00	A
10	191.05	-0.56	-0.04	B<	54.94	-0.67	-0.05	B<	1002.66	-1.44	-0.11	B<	271.06	-1.42	-0.12	B<	50.59	-0.95	-0.05	B<
11	0.67	-0.04	0.00	A	51.74	-0.80	-0.04	B<	207.50	-0.91	-0.05	B<	66.64	-0.91	-0.05	B<	16.08	-0.83	-0.02	B<
12	1.06	0.04	0.00	A	7.28	0.23	0.02	B>	133.05	0.50	0.04	B>	26.46	0.46	0.04	B>	1.55	0.16	0.01	A
13	22.84	0.22	0.01	B>	0.00	-0.01	0.00	A	10.81	0.18	0.01	B>	19.02	0.46	0.03	B>	2.78	0.30	0.01	A
14	5.60	0.10	0.01	A	3.15	-0.16	-0.01	A	80.64	-0.41	-0.03	B<	26.48	-0.47	-0.04	B<	2.03	-0.20	-0.01	A
15	301.79	0.73	0.05	B>	8.36	0.28	0.02	B>	173.83	0.63	0.05	B>	26.52	0.49	0.04	B>	1.53	0.18	0.01	A
16	2.51	0.06	0.00	A	1.36	0.11	0.01	A	116.75	0.49	0.04	B>	24.29	-0.44	-0.04	B<	0.15	-0.05	0.00	A
17	30.52	0.22	0.02	B>	3.84	-0.17	-0.01	A	9.16	-0.13	-0.01	B<	5.97	0.22	0.02	A	0.45	0.09	0.01	A
18	29.37	0.20	0.02	B>	5.06	0.19	0.02	A	133.61	0.49	0.04	B>	34.53	0.50	0.05	B>	0.45	0.08	0.01	A
19	103.67	0.39	0.03	B>	5.62	0.21	0.02	A	34.47	0.25	0.02	B>	2.12	-0.13	-0.01	A	20.87	0.60	0.04	B>
20	95.97	0.35	0.03	B>	19.75	0.37	0.03	B>	33.67	0.24	0.02	B>	13.90	0.32	0.03	B>	0.06	0.03	0.00	A
21	118.97	0.44	0.03	B>	1.30	-0.11	-0.01	A	22.13	-0.22	-0.01	B<	130.17	-1.00	-0.08	B<	12.26	-0.47	-0.03	B<
22	2.17	-0.06	0.00	A	2.32	-0.15	-0.01	A	35.69	-0.30	-0.02	B<	1.61	0.13	0.01	A	2.16	-0.23	-0.01	A
23	136.14	-0.49	-0.03	B<	3.85	0.19	0.01	A	28.37	0.26	0.01	B>	20.97	0.45	0.03	B>	10.74	0.49	0.03	B>
24	273.89	-0.68	-0.05	B<	18.00	-0.38	-0.03	B<	5.72	-0.11	-0.01	A	9.15	-0.28	-0.02	B<	0.00	0.01	0.00	A
25	160.68	-0.68	-0.03	B<	10.52	-0.39	-0.02	B<	92.36	-0.61	-0.03	B<	72.40	-0.92	-0.05	B<	5.89	-0.49	-0.01	A
26	142.15	-0.41	-0.04	B<	0.26	0.04	0.01	A	275.61	-0.65	-0.06	B<	17.55	-0.35	-0.04	B<	0.04	-0.02	0.00	A
27	135.69	-0.46	-0.03	B<	4.39	-0.19	-0.01	A	24.39	-0.22	-0.02	B<	7.13	0.24	0.02	B>	28.39	-0.65	-0.05	B<
28	105.75	-0.46	-0.03	B<	4.83	0.22	0.01	A	5.96	-0.12	0.00	A	0.21	-0.05	0.00	A	2.87	0.28	0.01	A
29	20.57	0.17	0.01	B>	0.26	0.05	0.00	A	27.33	-0.23	-0.02	B<	23.37	-0.42	-0.04	B<	6.17	0.33	0.02	A
30	38.67	-0.24	-0.02	B<	5.19	0.20	0.02	A	33.98	0.26	0.02	B>	3.98	0.18	0.02	A	19.61	0.60	0.04	B>

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.11 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 5**

Item	Reference: Male N = 41013				Reference: White N = 36098				Reference: White N = 36098				Reference: White N = 36098				Reference: White N = 36098			
	Focal: Female N = 39764				Focal: African Am. N = 4427				Focal: Hispanic N = 33937				Focal: Native Am. N = 4126				Focal: Asian N = 2222			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
31	8.15	0.10	0.01	B>	4.54	0.18	0.02	A	414.05	0.85	0.08	B>	0.01	-0.01	0.00	A	3.39	-0.21	-0.02	A
32	40.67	0.35	0.01	B>	9.41	0.36	0.02	B>	126.27	0.70	0.04	B>	75.44	1.09	0.06	B>	3.44	0.37	0.01	A
33	20.76	-0.18	-0.01	B<	1.92	0.12	0.01	A	47.51	0.31	0.02	B>	28.54	0.48	0.04	B>	5.78	0.32	0.02	A
34	1.73	-0.05	0.00	A	23.25	0.44	0.03	B>	129.32	0.53	0.04	B>	61.00	0.73	0.06	B>	24.01	0.71	0.04	B>
35	35.04	0.23	0.02	B>	35.71	0.52	0.04	B>	176.95	0.58	0.05	B>	71.78	0.75	0.07	B>	13.03	0.46	0.03	B>
36	6.52	0.10	0.01	A	12.78	0.32	0.03	B>	2.53	0.07	0.01	A	0.15	0.04	0.00	A	3.01	0.24	0.01	A
37	239.21	-0.71	-0.04	B<	19.95	-0.46	-0.03	B<	815.61	-1.46	-0.09	B<	69.22	-0.83	-0.06	B<	13.21	-0.60	-0.02	B<
38	3.49	-0.07	-0.01	A	14.52	-0.30	-0.03	B<	34.23	0.24	0.03	B>	0.81	0.08	0.01	A	4.10	-0.23	-0.02	A
39	422.91	-0.80	-0.06	B<	1.50	-0.11	-0.01	A	70.63	-0.36	-0.02	B<	10.98	0.30	0.03	B>	1.29	-0.14	-0.01	A
40	88.87	-0.34	-0.03	B<	0.00	0.01	0.00	A	83.25	-0.38	-0.03	B<	13.99	-0.34	-0.03	B<	15.69	-0.44	-0.04	B<
41	10.98	0.14	0.01	B>	0.04	-0.02	0.00	A	0.00	0.00	-0.01	A	8.88	-0.29	-0.02	B<	3.09	0.27	0.01	A
42	119.99	-0.40	-0.04	B<	46.56	-0.55	-0.05	B<	272.67	-0.67	-0.06	B<	0.52	-0.06	-0.01	A	44.15	-0.77	-0.06	B<
43	38.28	0.22	0.02	B>	76.46	0.72	0.07	B>	35.01	0.24	0.02	B>	9.49	0.26	0.03	B>	1.98	0.16	0.01	A
44	22.03	0.17	0.02	B>	17.91	0.35	0.03	B>	33.24	0.24	0.02	B>	0.01	-0.01	0.00	A	0.00	0.00	0.00	A
45	50.36	-0.39	-0.02	B<	2.61	-0.20	-0.01	A	4.59	-0.14	-0.01	A	6.10	0.31	0.01	A	2.25	0.34	0.01	A
46	43.24	0.24	0.02	B>	1.40	-0.10	-0.01	A	37.04	-0.25	-0.02	B<	8.70	-0.26	-0.02	B<	4.11	-0.23	-0.02	A
47	255.88	0.80	0.04	B>	3.95	0.22	0.01	A	64.13	0.46	0.03	B>	6.07	0.27	0.02	A	0.02	0.03	0.00	A
48	9.33	0.11	0.01	B>	27.71	0.44	0.04	B>	254.72	0.67	0.06	B>	98.17	0.87	0.08	B>	9.34	0.36	0.03	B>
49	38.42	0.22	0.02	B>	0.37	-0.05	0.00	A	8.62	0.12	0.01	B>	15.67	0.34	0.03	B>	0.13	0.04	0.00	A
50	7.07	-0.09	-0.01	B<	2.27	0.12	0.01	A	152.24	0.49	0.05	B>	9.90	0.26	0.03	B>	0.00	0.00	0.00	A
51	145.34	0.53	0.03	B>	0.04	0.02	0.00	A	2.57	0.08	0.01	A	4.58	-0.21	-0.01	A	1.17	0.18	0.01	A
52	35.32	0.23	0.02	B>	0.57	0.07	0.01	A	5.32	-0.10	-0.01	A	3.38	-0.16	-0.01	A	2.36	0.21	0.01	A
53	47.89	0.36	0.02	B>	2.89	-0.19	-0.01	A	0.10	0.02	0.00	A	0.10	-0.04	0.00	A	0.32	0.12	0.00	A
54	116.44	0.64	0.02	B>	0.29	0.07	0.00	A	51.44	0.49	0.02	B>	14.82	0.47	0.02	B>	5.63	0.59	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.12**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 6**

Item	Reference: Male N = 40682				Reference: White N = 36150				Reference: White N = 36150				Reference: White N = 36150				Reference: White N = 36150			
	Focal: Female N = 39160				Focal: African Am. N = 4373				Focal: Hispanic N = 33074				Focal: Native Am. N = 4019				Focal: Asian N = 2285			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	5.23	0.09	0.01	A	0.00	-0.01	0.00	A	12.53	-0.16	-0.01	B<	38.29	-0.56	-0.05	B<	17.60	-0.54	-0.03	B<
2	13.78	0.27	0.01	B>	0.09	0.05	0.00	A	0.61	0.07	0.00	A	0.11	-0.06	0.00	A	0.35	-0.19	0.00	A
3	216.80	-0.76	-0.03	B<	0.77	-0.10	-0.01	A	34.59	-0.35	-0.02	B<	52.99	-0.78	-0.05	B<	3.46	0.38	0.01	A
4	14.83	0.15	0.01	B>	0.08	-0.03	0.00	A	0.24	-0.02	0.01	A	15.17	-0.34	-0.03	B<	1.42	-0.15	-0.01	A
5	18.89	-0.16	-0.01	B<	9.45	0.25	0.02	B>	36.69	0.25	0.02	B>	7.68	0.24	0.02	B>	8.64	0.34	0.03	B>
6	117.58	-0.57	-0.02	B<	16.48	-0.48	-0.02	B<	385.07	-1.21	-0.07	B<	247.90	-1.65	-0.10	C<	12.26	-0.69	-0.02	B<
7	129.13	-0.49	-0.03	B<	0.88	0.09	0.00	A	10.21	0.16	0.01	B>	7.12	0.26	0.02	B>	3.83	-0.28	-0.02	A
8	70.50	-0.42	-0.02	B<	4.01	0.22	0.01	A	32.72	0.33	0.01	B>	44.05	0.74	0.05	B>	0.61	0.14	0.01	A
9	108.06	-0.58	-0.02	B<	0.22	0.06	0.00	A	41.98	0.42	0.02	B>	6.21	0.31	0.02	A	2.38	0.33	0.01	A
10	105.14	0.45	0.03	B>	8.43	0.29	0.02	B>	18.39	0.22	0.02	B>	17.14	0.42	0.03	B>	20.39	-0.61	-0.03	B<
11	0.00	0.01	0.00	A	1.25	0.17	0.01	A	34.28	0.49	0.02	B>	14.57	0.59	0.02	B>	0.44	0.20	0.00	A
12	11.65	0.20	0.01	B>	0.69	-0.11	0.00	A	6.25	-0.17	-0.01	A	3.94	-0.25	-0.01	A	7.75	-0.60	-0.01	B<
13	72.38	0.37	0.02	B>	0.01	-0.01	0.00	A	22.48	-0.23	-0.01	B<	7.05	-0.25	-0.02	B<	0.49	-0.11	-0.01	A
14	1.97	0.07	0.00	A	1.86	0.15	0.01	A	6.78	-0.14	-0.01	B<	58.13	-0.76	-0.05	B<	2.06	0.26	0.01	A
15	9.28	0.11	0.01	B>	2.10	-0.12	-0.01	A	7.02	0.11	0.01	B>	2.53	0.14	0.01	A	4.73	-0.26	-0.02	A
16	253.02	0.68	0.04	B>	1.71	0.13	0.01	A	3.40	-0.09	0.00	A	1.95	-0.13	-0.01	A	0.10	-0.05	0.00	A
17	1.83	0.05	0.00	A	0.02	0.01	0.00	A	5.28	-0.10	-0.02	A	6.82	-0.23	-0.02	B<	0.29	0.06	0.01	A
18	173.20	-0.65	-0.03	B<	0.11	-0.04	0.00	A	3.66	-0.11	-0.01	A	1.39	0.13	0.01	A	6.55	0.48	0.02	A
19	83.34	-0.45	-0.02	B<	15.09	-0.40	-0.02	B<	26.37	-0.29	-0.02	B<	17.71	0.45	0.03	B>	0.23	0.09	0.00	A
20	3.61	-0.08	0.00	A	2.43	-0.14	-0.01	A	39.31	-0.29	-0.02	B<	1.48	-0.11	-0.01	A	23.05	-0.61	-0.04	B<
21	0.99	0.05	0.00	A	0.04	0.03	0.00	A	33.78	0.36	0.02	B>	16.44	0.48	0.03	B>	13.00	0.76	0.02	B>
22	323.17	-0.72	-0.05	B<	0.17	-0.04	0.00	A	36.26	-0.27	-0.03	B<	12.12	0.32	0.03	B>	5.44	0.32	0.02	A
23	0.36	-0.02	0.00	A	69.67	0.74	0.06	B>	148.26	0.53	0.03	B>	15.59	0.35	0.03	B>	9.87	0.37	0.03	B>
24	9.62	-0.14	-0.01	B<	0.14	-0.04	0.00	A	29.91	-0.28	-0.01	B<	3.16	0.18	0.01	A	1.82	-0.22	-0.01	A
25	137.59	0.72	0.02	B>	0.17	-0.06	0.00	A	0.34	0.04	0.00	A	3.80	0.26	0.01	A	6.43	-0.55	-0.01	A
26	0.50	0.03	0.00	A	167.04	-1.31	-0.07	B<	845.67	-1.65	-0.09	C<	120.54	-1.12	-0.07	B<	53.16	-1.21	-0.04	B<
27	48.22	0.30	0.02	B>	0.90	0.09	0.01	A	0.89	0.05	0.00	A	0.28	0.05	0.00	A	5.26	-0.32	-0.02	A
28	48.88	0.26	0.02	B>	10.53	0.27	0.03	B>	86.01	0.40	0.04	B>	1.20	-0.10	-0.01	A	0.50	0.09	0.01	A
29	51.68	0.27	0.03	B>	0.00	-0.01	0.00	A	45.81	0.29	0.02	B>	3.19	0.17	0.01	A	0.82	0.11	0.01	A
30	64.95	-0.29	-0.03	B<	0.66	0.07	0.01	A	14.29	0.15	0.02	B>	1.23	0.10	0.01	A	39.86	0.71	0.06	B>

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.12 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 6**

Item	Reference: Male N = 40682				Reference: White N = 36150				Reference: White N = 36150				Reference: White N = 36150				Reference: White N = 36150			
	Focal: Female N = 39160				Focal: African Am. N =				Focal: Hispanic N = 33074				Focal: Native Am. N = 4019				Focal: Asian N = 2285			
	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag	MH $\chi^2$	$\Delta MH$	SMD	Flag
31	14.01	-0.14	-0.01	B<	4.63	-0.18	-0.02	A	20.88	-0.19	-0.02	B<	75.65	0.78	0.07	B>	9.88	-0.36	-0.03	B<
32	131.45	0.79	0.02	B>	0.41	0.10	0.00	A	23.82	0.39	0.01	B>	23.00	0.72	0.03	B>	4.07	0.59	0.01	A
33	95.67	-0.41	-0.03	B<	0.03	0.02	0.00	A	59.34	0.37	0.03	B>	21.73	0.46	0.03	B>	3.57	0.26	0.02	A
34	268.57	-0.60	-0.05	B<	1.97	-0.12	-0.01	A	26.49	-0.22	-0.02	B<	4.05	-0.18	-0.02	A	0.11	0.04	0.00	A
35	1112.80	-1.42	-0.09	B<	4.01	0.19	0.01	A	1.48	0.06	0.00	A	0.37	-0.06	-0.01	A	6.07	0.36	0.02	A
36	2.05	0.06	0.00	A	9.81	-0.29	-0.02	B<	454.10	-0.98	-0.07	B<	15.16	-0.36	-0.03	B<	20.12	-0.62	-0.03	B<
37	217.82	0.61	0.04	B>	3.56	0.18	0.01	A	0.00	0.00	0.00	A	15.16	-0.36	-0.03	B<	0.08	-0.04	0.00	A
38	131.15	0.44	0.03	B>	9.79	0.27	0.03	B>	29.97	0.24	0.03	B>	20.42	0.40	0.04	B>	0.87	0.12	0.01	A
39	285.68	-0.60	-0.06	B<	0.60	0.06	0.01	A	0.13	0.01	0.00	A	10.04	-0.27	-0.03	B<	15.85	-0.44	-0.04	B<
40	11.75	0.14	0.01	B>	3.12	-0.16	-0.01	A	1.22	0.05	0.01	A	26.27	0.47	0.04	B>	3.14	0.24	0.01	A
41	71.78	0.33	0.03	B>	0.82	-0.08	-0.01	A	1.51	0.05	0.01	A	12.43	-0.32	-0.03	B<	0.32	0.07	0.01	A
42	29.85	0.20	0.02	B>	17.53	0.35	0.03	B>	0.31	-0.02	0.00	A	16.53	0.36	0.03	B>	0.37	0.07	0.01	A
43	4.81	0.08	0.01	A	2.17	0.12	0.01	A	0.66	-0.03	0.00	A	0.12	0.03	0.01	A	11.71	-0.38	-0.03	B<
44	30.17	0.20	0.02	B>	0.06	0.02	0.00	A	6.56	-0.11	-0.01	A	0.75	0.08	0.01	A	0.00	-0.01	0.00	A
45	52.19	0.26	0.02	B>	1.05	0.09	0.01	A	55.30	0.31	0.03	B>	61.21	0.68	0.06	B>	26.29	0.58	0.05	B>
46	10.49	0.14	0.01	B>	2.44	-0.15	-0.01	A	11.14	0.17	0.01	B>	21.78	0.46	0.03	B>	5.02	0.34	0.02	A
47	7.40	0.13	0.01	B>	19.25	-0.43	-0.03	B<	0.90	-0.05	0.00	A	2.70	-0.17	-0.01	A	7.57	-0.44	-0.02	B<
48	332.35	0.71	0.06	B>	5.62	-0.20	-0.02	A	27.11	0.23	0.02	B>	22.01	0.42	0.04	B>	8.41	0.37	0.03	B>
49	239.63	0.68	0.04	B>	0.87	0.09	0.01	A	0.01	0.00	0.00	A	96.25	-0.90	-0.07	B<	0.56	-0.12	-0.01	A
50	75.90	-0.31	-0.03	B<	3.48	0.16	0.01	A	0.87	0.04	0.01	A	1.86	-0.12	-0.01	A	0.03	0.02	0.00	A
51	14.22	0.15	0.01	B>	1.28	-0.10	-0.01	A	85.49	0.41	0.04	B>	45.15	-0.60	-0.05	B<	4.39	-0.27	-0.02	A
52	185.38	0.67	0.03	B>	6.75	-0.28	-0.02	B<	5.22	-0.13	-0.01	A	174.33	-1.31	-0.09	B<	0.16	0.08	0.00	A
53	88.71	-0.35	-0.03	B<	2.65	-0.14	-0.01	A	6.70	0.11	0.01	B>	14.58	0.35	0.03	B>	2.72	0.20	0.02	A
54	0.04	0.01	0.00	A	0.28	-0.05	0.00	A	4.12	0.09	0.01	A	39.14	0.56	0.05	B>	7.91	0.35	0.03	B>

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta MH$  = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.13**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 7**

Item	Reference: Male N = 40840				Reference: White N = 36479				Reference: White N = 36479				Reference: White N = 36479				Reference: White N = 36479			
	Focal: Female N = 39356				Focal: African Am. N = 4382				Focal: Hispanic N = 32875				Focal: Native Am. N = 4418				Focal: Asian N = 2111			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	49.16	0.45	0.01	B>	2.98	-0.24	-0.01	A	0.37	-0.05	0.00	A	0.35	0.08	0.00	A	1.05	-0.26	-0.01	A
2	306.56	0.63	0.06	B>	7.28	-0.22	-0.02	B<	86.81	-0.38	-0.04	B<	12.42	-0.29	-0.03	B<	6.70	-0.31	-0.03	B<
3	522.44	-1.18	-0.05	B<	39.63	-0.71	-0.04	B<	492.29	-1.32	-0.08	B<	152.83	-1.28	-0.08	B<	28.48	-1.01	-0.03	B<
4	245.01	-0.68	-0.04	B<	29.95	-0.52	-0.04	B<	378.44	-0.95	-0.07	B<	349.42	-1.68	-0.13	C<	63.06	-1.18	-0.06	B<
5	0.16	-0.02	0.00	A	3.08	0.17	0.01	A	49.21	0.34	0.03	B>	6.85	0.24	0.02	B>	6.36	0.40	0.02	A
6	10.46	-0.14	-0.01	B<	4.58	0.22	0.01	A	14.75	-0.19	-0.01	B<	59.37	-0.69	-0.05	B<	7.62	-0.43	-0.02	B<
7	33.36	-0.24	-0.02	B<	2.38	0.14	0.01	A	13.34	-0.17	-0.02	B<	1.80	-0.12	-0.01	A	0.19	0.07	0.00	A
8	7.03	-0.15	0.00	B<	0.25	0.07	0.00	A	14.65	-0.26	-0.01	B<	11.60	-0.40	-0.02	B<	0.20	-0.11	0.00	A
9	19.59	0.17	0.02	B>	0.43	0.06	0.01	A	7.66	-0.12	-0.01	B<	16.83	-0.35	-0.03	B<	0.01	0.02	0.00	A
10	230.78	-0.66	-0.04	B<	33.12	-0.54	-0.04	B<	609.19	-1.19	-0.09	B<	57.13	-0.70	-0.05	B<	55.00	-1.09	-0.05	B<
11	0.28	-0.02	0.00	A	2.03	0.12	0.01	A	46.52	0.30	0.02	B>	12.03	0.31	0.03	B>	0.09	0.04	0.00	A
12	41.98	-0.32	-0.01	B<	0.69	0.10	0.00	A	68.74	-0.47	-0.03	B<	142.61	-1.15	-0.08	B<	10.51	-0.60	-0.02	B<
13	14.25	-0.17	-0.01	B<	28.89	0.56	0.03	B>	146.52	0.64	0.03	B>	0.93	0.10	0.00	A	2.65	-0.24	-0.01	A
14	20.80	-0.19	-0.01	B<	6.52	0.24	0.02	A	44.23	0.31	0.02	B>	15.64	0.36	0.03	B>	8.83	0.45	0.03	B>
15	57.49	-0.34	-0.02	B<	1.97	0.14	0.01	A	81.78	0.47	0.03	B>	5.56	0.23	0.02	A	5.64	0.40	0.02	A
16	91.69	-0.39	-0.03	B<	12.34	-0.31	-0.03	B<	8.45	-0.13	-0.02	B<	2.29	0.14	0.01	A	8.11	-0.40	-0.02	B<
17	12.38	-0.20	-0.01	B<	3.40	-0.23	-0.01	A	0.16	-0.03	0.00	A	11.82	0.43	0.02	B>	2.86	0.40	0.01	A
18	5.06	0.10	0.01	A	0.09	0.03	0.00	A	1.27	0.05	0.01	A	2.92	-0.16	-0.01	A	3.82	0.30	0.02	A
19	493.63	-0.89	-0.07	B<	13.67	-0.32	-0.03	B<	14.78	-0.17	-0.01	B<	10.62	-0.28	-0.02	B<	0.73	0.12	0.01	A
20	1.59	-0.05	-0.01	A	6.74	-0.21	-0.02	B<	0.03	0.01	0.01	A	0.62	0.07	0.01	A	7.70	0.33	0.03	B>
21	93.16	0.44	0.02	B>	0.01	-0.01	0.00	A	23.78	0.25	0.02	B>	12.71	0.35	0.02	B>	7.50	0.49	0.02	B>
22	7.65	0.12	0.01	B>	2.00	-0.14	-0.01	A	0.58	0.04	0.01	A	1.96	-0.13	-0.01	A	31.28	-0.80	-0.04	B<
23	345.50	0.75	0.06	B>	12.86	-0.32	-0.03	B<	12.29	-0.16	-0.02	B<	2.04	0.13	0.01	A	21.20	-0.61	-0.04	B<
24	162.85	0.46	0.04	B>	53.39	0.60	0.06	B>	69.11	0.34	0.03	B>	77.22	0.73	0.07	B>	7.32	0.33	0.03	B>
25	102.22	-0.40	-0.03	B<	2.80	-0.15	-0.01	A	69.16	-0.37	-0.03	B<	55.92	-0.62	-0.05	B<	2.60	-0.22	-0.01	A
26	11.43	0.14	0.01	B>	6.61	0.23	0.02	A	20.61	0.21	0.02	B>	5.80	-0.21	-0.02	A	2.97	0.24	0.01	A
27	13.48	0.14	0.01	B>	6.36	0.22	0.02	A	6.19	-0.11	0.00	A	11.91	-0.31	-0.02	B<	15.41	0.52	0.04	B>
28	15.84	-0.15	-0.01	B<	1.93	0.12	0.01	A	30.63	-0.23	-0.02	B<	79.49	-0.76	-0.07	B<	0.13	-0.05	0.00	A
29	36.20	0.22	0.02	B>	7.91	0.24	0.02	B>	101.13	0.43	0.03	B>	32.31	0.48	0.04	B>	13.82	0.46	0.04	B>
30	111.63	0.45	0.03	B>	0.83	0.09	0.01	A	1.68	-0.06	-0.01	A	6.21	-0.22	-0.02	A	3.69	-0.28	-0.02	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD=Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.13 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 7**

Item	Reference: Male N = 40840 Focal: Female N = 39356				Reference: White N = 36479 Focal: African Am. N = 4382				Reference: White N = 36479 Focal: Hispanic N = 32875				Reference: White N = 36479 Focal: Native Am. N = 4418				Reference: White N = 36479 Focal: Asian N = 2111			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	95.27	0.41	0.03	B>	1.19	-0.10	-0.01	A	1.02	-0.05	0.00	A	1.43	0.11	0.01	A	3.39	-0.28	-0.01
32	5.08	-0.09	-0.01	A	0.01	0.01	0.00	A	20.87	0.20	0.01	B>	0.98	-0.09	-0.01	A	6.81	0.34	0.02	B>
33	113.11	0.49	0.03	B>	0.28	-0.05	0.00	A	91.46	0.51	0.04	B>	4.96	0.21	0.02	A	26.98	0.96	0.04	B>
34	2.39	-0.06	0.00	A	20.88	-0.38	-0.03	B<	15.53	-0.16	-0.01	B<	14.69	-0.32	-0.03	B<	22.29	-0.55	-0.05	B<
35	126.12	0.48	0.03	B>	4.77	-0.20	-0.01	A	24.60	-0.24	-0.01	B<	5.15	-0.20	-0.01	A	13.08	-0.53	-0.03	B<
36	90.50	0.41	0.03	B>	1.33	-0.11	-0.01	A	19.00	0.21	0.02	B>	8.22	0.26	0.02	B>	0.01	-0.02	0.00	A
37	788.33	-1.10	-0.09	B<	4.78	-0.20	-0.02	A	147.06	-0.54	-0.04	B<	27.60	-0.49	-0.04	B<	8.04	-0.34	-0.03	B<
38	54.36	0.27	0.02	B>	2.11	0.12	0.01	A	1.11	0.04	0.00	A	3.69	-0.16	-0.01	A	10.52	0.39	0.03	B>
39	33.68	-0.22	-0.02	B<	6.83	0.22	0.02	B>	5.92	0.11	0.02	A	0.31	-0.05	0.00	A	0.15	0.05	0.00	A
40	90.25	-0.33	-0.03	B<	3.81	0.16	0.02	A	0.01	0.00	0.00	A	148.53	0.98	0.10	B>	2.45	-0.17	-0.02	A
41	18.97	0.19	0.01	B>	0.59	0.07	0.01	A	66.74	0.40	0.03	B>	389.72	2.01	0.14	C>	1.74	-0.20	-0.01	A
42	89.86	0.41	0.02	B>	1.15	0.10	0.01	A	45.57	0.33	0.03	B>	120.79	1.06	0.08	B>	1.16	0.18	0.01	A
43	36.55	0.24	0.02	B>	5.44	0.21	0.02	A	4.10	0.09	0.01	A	2.14	0.13	0.01	A	0.00	0.00	0.00	A
44	237.03	0.73	0.04	B>	0.34	0.06	0.00	A	45.76	0.37	0.02	B>	22.74	0.50	0.03	B>	8.00	0.51	0.02	B>
45	63.97	0.32	0.02	B>	1.59	0.11	0.01	A	33.32	0.26	0.02	B>	7.56	-0.24	-0.02	B<	2.70	-0.22	-0.01	A
46	0.03	0.01	0.00	A	25.98	0.46	0.04	B>	260.47	0.74	0.06	B>	109.90	0.94	0.08	B>	19.64	0.64	0.04	B>
47	1.63	0.06	0.00	A	1.91	-0.15	-0.01	A	26.79	-0.29	-0.02	B<	0.01	-0.01	0.00	A	0.25	0.11	0.00	A
48	34.68	-0.22	-0.02	B<	34.99	0.51	0.04	B>	18.89	0.19	0.01	B>	0.35	-0.05	-0.01	A	34.61	0.78	0.06	B>
49	13.47	0.15	0.01	B>	3.20	0.16	0.01	A	12.49	0.16	0.02	B>	1.21	0.10	0.01	A	0.57	0.11	0.01	A
50	200.64	0.65	0.03	B>	0.70	-0.08	0.00	A	4.45	0.11	0.01	A	6.15	-0.24	-0.02	A	1.64	-0.22	-0.01	A
51	51.79	-0.27	-0.02	B<	17.91	-0.36	-0.03	B<	46.31	-0.29	-0.02	B<	8.72	-0.26	-0.02	B<	0.03	0.02	0.00	A
52	32.50	0.26	0.02	B>	0.16	-0.04	0.00	A	38.51	0.32	0.02	B>	47.88	0.68	0.05	B>	12.31	0.62	0.03	B>
53	19.80	-0.19	-0.01	B<	4.88	-0.21	-0.01	A	0.18	-0.02	0.00	A	10.12	0.29	0.02	B>	0.00	0.01	0.00	A
54	84.27	-0.34	-0.03	B<	11.96	-0.29	-0.03	B<	2.12	0.06	0.00	A	23.26	0.41	0.04	B>	2.23	0.19	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.14**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 8**

Item	Reference: Male N = 39982				Reference: White N = 36574				Reference: White N = 36574				Reference: White N = 36574				Reference: White N = 36574			
	Focal: Female N = 38754				Focal: African Am. N = 4331				Focal: Hispanic N = 31344				Focal: Native Am. N = 4525				Focal: Asian N = 2027			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	95.12	0.54	0.02	B>	14.94	-0.46	-0.02	B<	80.50	-0.58	-0.03	B<	4.93	0.28	0.01	A	58.04	-1.33	-0.04	B<
2	12.36	0.13	0.01	B>	82.91	0.77	0.07	B>	239.56	0.66	0.05	B>	113.14	0.89	0.08	B>	62.71	1.05	0.08	B>
3	368.44	-0.75	-0.06	B<	11.35	-0.29	-0.02	B<	218.20	-0.65	-0.06	B<	28.88	-0.46	-0.04	B<	5.78	-0.32	-0.02	A
4	56.79	-0.33	-0.02	B<	14.24	-0.36	-0.03	B<	14.69	-0.19	-0.02	B<	38.46	-0.57	-0.05	B<	2.08	-0.23	-0.01	A
5	2.03	0.06	0.01	A	0.03	0.02	0.00	A	53.00	-0.32	-0.03	B<	40.09	-0.54	-0.05	B<	0.67	0.12	0.01	A
6	95.28	-0.40	-0.03	B<	0.90	0.09	0.01	A	184.20	-0.65	-0.06	B<	201.64	-1.22	-0.11	B<	0.41	-0.10	-0.01	A
7	0.15	-0.02	0.00	A	2.65	0.17	0.01	A	33.48	0.31	0.03	B>	17.95	0.42	0.03	B>	0.58	0.14	0.01	A
8	14.53	-0.13	-0.01	B<	2.13	0.12	0.01	A	12.47	0.14	0.02	B>	20.92	0.37	0.04	B>	3.69	0.23	0.02	A
9	368.52	-0.74	-0.06	B<	15.03	-0.33	-0.03	B<	287.60	-0.74	-0.06	B<	41.42	-0.53	-0.05	B<	27.90	-0.68	-0.05	B<
10	214.55	-0.63	-0.04	B<	10.60	-0.30	-0.02	B<	1.04	-0.05	0.00	A	0.20	0.04	0.00	A	0.10	0.06	0.00	A
11	35.96	-0.24	-0.02	B<	3.71	0.17	0.01	A	0.36	-0.03	0.00	A	62.68	0.69	0.06	B>	4.11	0.29	0.02	A
12	0.50	0.03	0.00	A	0.28	0.05	0.00	A	9.37	-0.13	-0.02	B<	29.45	-0.46	-0.04	B<	43.91	-0.83	-0.06	B<
13	17.82	-0.16	-0.01	B<	22.61	0.41	0.04	B>	29.80	0.24	0.02	B>	30.14	0.47	0.04	B>	31.97	0.77	0.05	B>
14	10.40	0.16	0.01	B>	0.10	0.04	0.00	A	30.47	-0.31	-0.01	B<	77.60	-0.84	-0.06	B<	0.00	-0.01	0.00	A
15	106.00	0.46	0.03	B>	2.16	-0.14	-0.01	A	93.93	0.50	0.04	B>	7.10	0.25	0.02	B>	1.26	0.19	0.01	A
16	37.43	0.24	0.02	B>	19.26	0.38	0.03	B>	178.32	0.60	0.05	B>	123.67	0.97	0.08	B>	34.78	0.82	0.06	B>
17	650.00	1.01	0.08	B>	61.90	-0.68	-0.05	B<	0.89	-0.04	0.00	A	5.13	0.20	0.02	A	7.30	-0.36	-0.02	B<
18	133.33	-0.43	-0.04	B<	10.02	-0.27	-0.02	B<	47.95	-0.29	-0.02	B<	9.82	-0.26	-0.02	B<	0.56	-0.10	-0.01	A
19	61.11	0.40	0.02	B>	32.99	-0.61	-0.03	B<	32.56	-0.34	-0.02	B<	8.83	-0.31	-0.02	B<	4.72	-0.43	-0.01	A
20	21.34	-0.19	-0.01	B<	58.56	-0.69	-0.06	B<	277.40	-0.77	-0.07	B<	179.68	-1.12	-0.10	B<	148.09	-1.62	-0.10	C<
21	26.01	0.35	0.01	B>	4.68	-0.32	-0.01	A	1.92	-0.12	0.00	A	66.74	-1.02	-0.04	B<	0.10	0.11	0.00	A
22	19.40	-0.16	-0.01	B<	18.57	-0.36	-0.03	B<	28.01	-0.22	-0.02	B<	18.18	-0.37	-0.03	B<	1.76	0.16	0.01	A
23	150.44	0.45	0.04	B>	0.05	-0.02	0.00	A	17.36	0.18	0.01	B>	16.72	0.34	0.03	B>	3.56	-0.23	-0.02	A
24	0.20	0.02	0.00	A	11.77	-0.33	-0.02	B<	8.53	-0.15	-0.01	B<	237.61	-1.33	-0.11	B<	3.53	-0.30	-0.01	A
25	456.88	-1.15	-0.05	B<	9.72	-0.36	-0.02	B<	31.36	-0.35	-0.02	B<	36.01	-0.64	-0.04	B<	25.66	-0.98	-0.03	B<
26	1026.96	-1.19	-0.11	B<	79.28	-0.75	-0.07	B<	197.48	-0.59	-0.06	B<	0.12	0.03	0.00	A	20.56	-0.55	-0.05	B<
27	28.27	0.21	0.02	B>	0.36	0.06	0.00	A	36.31	-0.28	-0.02	B<	30.88	-0.47	-0.04	B<	0.02	0.03	0.00	A
28	84.73	-0.39	-0.02	B<	8.16	0.27	0.02	B>	30.93	0.27	0.01	B>	0.02	0.01	0.00	A	5.31	0.37	0.02	A
29	22.73	-0.19	-0.01	B<	2.82	-0.15	-0.01	A	136.66	-0.54	-0.03	B<	80.17	-0.88	-0.06	B<	23.90	-0.62	-0.05	B<
30	365.70	-0.89	-0.05	B<	9.58	-0.31	-0.02	B<	483.34	-1.14	-0.08	B<	1.80	0.13	0.01	A	21.01	-0.77	-0.03	B<

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH=Delta (MH-D DIF), SMD= Standardized Mean Difference, A=No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

(table continues)

**Table 9.2.1.14 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT Grade 8**

Item	Reference: Male N = 39982 Focal: Female N = 38754				Reference: White N = 36574 Focal: African Am. N = 4331				Reference: White N = 36574 Focal: Hispanic N = 31344				Reference: White N = 36574 Focal: Native Am. N = 4525				Reference: White N = 36574 Focal: Asian N = 2027			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	123.58	0.47	0.03	B>	1.80	0.13	0.01	A	17.36	-0.20	-0.02	B<	5.90	0.22	0.02	A	0.06	0.04	0.00
32	36.79	0.23	0.02	B>	1.22	0.10	0.01	A	27.11	0.23	0.02	B>	7.27	-0.22	-0.02	B<	5.64	-0.29	-0.02	A
33	9.14	0.14	0.01	B>	0.32	-0.06	0.00	A	146.28	-0.65	-0.04	B<	334.38	-1.63	-0.12	C<	27.16	-0.91	-0.03	B<
34	72.50	0.35	0.02	B>	2.56	-0.15	-0.01	A	24.14	0.23	0.02	B>	67.48	0.75	0.06	B>	5.01	-0.31	-0.02	A
35	257.57	0.99	0.03	B>	0.56	0.10	0.00	A	25.67	0.36	0.01	B>	22.46	0.56	0.03	B>	3.48	0.49	0.01	A
36	25.62	0.18	0.02	B>	0.21	0.04	0.00	A	4.21	-0.09	-0.01	A	23.86	-0.40	-0.03	B<	5.42	0.28	0.02	A
37	35.32	0.21	0.02	B>	3.04	0.14	0.01	A	9.58	-0.13	-0.01	B<	82.23	0.74	0.07	B>	0.06	0.03	0.00	A
38	0.01	0.00	0.00	A	5.72	0.22	0.02	A	64.98	0.39	0.03	B>	60.34	0.70	0.06	B>	37.06	1.02	0.05	B>
39	20.93	0.17	0.01	B>	37.46	-0.50	-0.04	B<	0.00	0.00	0.01	A	0.78	0.07	0.01	A	2.05	-0.17	-0.02	A
40	60.06	0.28	0.02	B>	19.34	0.36	0.03	B>	173.22	0.55	0.06	B>	103.21	0.83	0.08	B>	20.61	0.59	0.05	B>
41	322.91	-0.68	-0.06	B<	31.57	-0.48	-0.04	B<	0.51	-0.03	0.00	A	9.88	-0.27	-0.02	B<	3.41	0.24	0.02	A
42	0.09	0.02	0.00	A	3.85	0.23	0.01	A	20.00	0.26	0.02	B>	0.02	0.02	0.00	A	0.07	-0.06	0.00	A
43	201.79	-0.53	-0.05	B<	2.85	0.14	0.01	A	10.64	0.14	0.01	B>	4.18	-0.18	-0.01	A	0.00	0.01	0.00	A
44	4.21	-0.08	-0.01	A	14.82	0.33	0.03	B>	13.13	0.16	0.02	B>	3.91	0.17	0.02	A	16.23	0.57	0.04	B>
45	13.50	-0.13	-0.01	B<	14.65	0.31	0.03	B>	187.92	0.57	0.05	B>	1.00	0.08	0.01	A	4.46	0.25	0.02	A
46	9.46	0.12	0.01	B>	0.00	0.00	0.00	A	70.81	0.39	0.03	B>	62.05	0.70	0.06	B>	12.61	0.53	0.03	B>
47	11.46	-0.14	-0.01	B<	2.73	-0.15	-0.01	A	1.88	0.06	0.01	A	5.77	0.21	0.02	A	0.08	0.04	0.00	A
48	147.21	0.55	0.03	B>	1.01	0.10	0.01	A	129.12	-0.58	-0.03	B<	16.92	-0.38	-0.03	B<	0.27	-0.10	0.00	A
49	300.55	0.81	0.04	B>	11.68	0.35	0.02	B>	85.94	0.50	0.03	B>	2.87	-0.16	-0.01	A	0.02	0.03	0.00	A
50	73.97	0.34	0.03	B>	31.75	0.50	0.04	B>	230.90	0.70	0.06	B>	112.64	0.92	0.08	B>	27.07	0.75	0.05	B>
51	184.13	0.59	0.04	B>	2.64	0.16	0.01	A	65.53	0.40	0.03	B>	35.20	0.54	0.04	B>	7.07	0.45	0.02	B>
52	575.83	0.99	0.07	B>	34.75	0.54	0.04	B>	292.00	0.81	0.06	B>	146.18	1.07	0.09	B>	20.69	0.69	0.04	B>
53	2.52	0.07	0.01	A	51.76	0.68	0.05	B>	14.54	0.18	0.01	B>	10.11	-0.28	-0.02	B<	0.58	-0.11	-0.01	A
54	63.35	0.33	0.02	B>	32.12	0.53	0.04	B>	152.03	0.59	0.05	B>	78.62	0.79	0.07	B>	0.39	-0.09	-0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test and NRT items.

**Table 9.2.1.15**  
**2007 Spring AIMS Differential Item Functioning Reading CRT High School**

Item	Reference: Male N = 37196				Reference: White N = 36336				Reference: White N = 36336				Reference: White N = 36336				Reference: White N = 36336			
	Focal: Female N = 36123				Focal: African Am. N = 4000				Focal: Hispanic N = 26563				Focal: Native Am. N = 4462				Focal: Asian N = 1999			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
1	0.28	0.02	0.00	A	45.56	-0.63	-0.05	B<	157.00	-0.61	-0.06	B<	11.16	-0.30	-0.03	B<	17.34	-0.61	-0.04	B<
2	100.87	0.41	0.03	B>	2.51	-0.14	-0.01	A	32.04	0.27	0.02	B>	8.34	-0.25	-0.02	B<	8.77	-0.39	-0.03	B<
3	8.66	-0.15	-0.01	B<	11.84	-0.37	-0.02	B<	53.41	-0.43	-0.03	B<	3.37	-0.19	-0.02	A	10.34	-0.56	-0.02	B<
4	46.35	0.29	0.02	B>	0.44	-0.07	-0.01	A	109.81	-0.52	-0.05	B<	22.64	-0.43	-0.04	B<	11.39	-0.48	-0.03	B<
5	118.41	0.42	0.04	B>	23.42	0.43	0.04	B>	27.08	0.23	0.02	B>	26.43	0.44	0.04	B>	48.90	0.94	0.07	B>
6	3.98	-0.09	-0.01	A	12.06	-0.35	-0.02	B<	57.43	-0.41	-0.04	B<	61.52	-0.73	-0.06	B<	5.01	-0.36	-0.02	A
7	61.12	-0.31	-0.03	B<	20.66	-0.41	-0.03	B<	11.16	-0.15	-0.02	B<	128.79	-1.07	-0.08	B<	0.09	0.04	0.00	A
8	29.69	-0.25	-0.02	B<	0.00	0.00	0.00	A	35.19	0.32	0.03	B>	0.27	-0.05	-0.01	A	9.67	0.52	0.02	B>
9	27.69	0.20	0.02	B>	0.25	0.04	0.00	A	10.70	-0.15	-0.02	B<	88.73	-0.78	-0.08	B<	4.13	-0.26	-0.02	A
10	3.51	0.07	0.01	A	15.49	-0.33	-0.03	B<	0.77	0.04	0.01	A	3.39	-0.15	-0.01	A	1.32	-0.15	-0.01	A
11	27.21	-0.29	-0.01	B<	9.41	-0.36	-0.02	B<	2.15	-0.10	0.00	A	1.69	-0.15	-0.01	A	21.66	-0.84	-0.03	B<
12	129.80	0.61	0.03	B>	2.88	-0.20	-0.01	A	0.33	0.04	0.00	A	0.00	0.00	0.00	A	20.23	-0.79	-0.03	B<
13	38.06	0.28	0.02	B>	0.11	-0.04	0.00	A	0.57	0.04	0.00	A	76.29	0.86	0.06	B>	0.41	-0.11	-0.01	A
14	16.99	0.26	0.01	B>	0.47	0.10	0.00	A	0.08	-0.02	0.00	A	36.61	0.79	0.04	B>	0.40	0.17	0.00	A
15	6.66	0.14	0.01	B>	2.77	-0.20	-0.01	A	143.44	-0.76	-0.05	B<	22.12	-0.51	-0.03	B<	22.84	-0.94	-0.03	B<
16	285.61	0.62	0.06	B>	37.27	0.51	0.05	B>	71.94	0.37	0.04	B>	15.43	0.32	0.04	B>	0.04	-0.03	0.00	A
17	23.78	-0.20	-0.02	B<	14.01	-0.34	-0.03	B<	2.29	0.07	0.00	A	4.89	0.20	0.02	A	9.31	-0.41	-0.03	B<
18	145.38	-0.45	-0.04	B<	0.20	-0.04	0.00	A	18.46	0.19	0.01	B>	6.25	0.21	0.02	A	0.00	-0.01	0.00	A
19	490.58	-0.87	-0.07	B<	0.62	-0.07	-0.01	A	6.67	0.12	0.00	B>	0.17	-0.04	0.00	A	4.90	-0.28	-0.02	A
20	152.67	-0.52	-0.04	B<	9.44	-0.28	-0.02	B<	0.01	-0.01	0.00	A	5.30	0.21	0.02	A	4.87	0.33	0.02	A
21	33.79	-0.41	-0.01	B<	0.34	0.09	0.00	A	38.00	0.50	0.02	B>	20.44	0.61	0.03	B>	7.33	0.81	0.01	B>
22	34.80	-0.27	-0.02	B<	1.45	0.12	0.01	A	14.46	-0.20	-0.02	B<	35.05	-0.55	-0.04	B<	0.48	-0.12	-0.01	A
23	5.81	0.16	0.00	A	0.06	0.04	0.00	A	87.40	0.71	0.03	B>	21.82	0.58	0.03	B>	21.71	1.33	0.02	B>
24	120.04	0.55	0.03	B>	0.72	0.09	0.01	A	0.19	-0.03	0.00	A	24.57	0.50	0.04	B>	12.56	-0.61	-0.03	B<
25	268.18	0.66	0.05	B>	51.49	0.68	0.05	B>	120.17	0.53	0.04	B>	12.62	-0.31	-0.03	B<	3.59	-0.24	-0.02	A
26	9.45	0.13	0.01	B>	0.36	0.06	0.00	A	0.07	0.01	-0.01	A	93.31	-0.87	-0.07	B<	18.79	-0.58	-0.04	B<
27	2577.63	-2.20	-0.16	C<	3.18	-0.17	-0.01	A	233.57	-0.73	-0.06	B<	217.72	-1.28	-0.11	B<	2.22	-0.22	-0.01	A
28	150.50	0.77	0.02	B>	10.74	0.45	0.02	B>	25.67	0.38	0.01	B>	0.96	-0.11	0.00	A	2.49	0.40	0.01	A
29	7.84	-0.13	-0.01	B<	0.04	0.02	0.00	A	89.38	-0.49	-0.03	B<	1.61	-0.12	-0.01	A	0.22	-0.08	0.00	A
30	173.15	0.61	0.04	B>	22.53	0.49	0.03	B>	6.94	0.14	0.01	B>	0.53	-0.07	0.00	A	2.52	-0.26	-0.01	A

Note. African Am.=African American, Native Am.=Native American, MH  $\chi^2$ =Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

(table continues)

**Table 9.2.1.15 (continued)**  
**2007 Spring AIMS Differential Item Functioning Reading CRT High School**

Item	Reference: Male N = 37196 Focal: Female N = 36123				Reference: White N = 36336 Focal: African Am. N = 4000				Reference: White N = 36336 Focal: Hispanic N = 26563				Reference: White N = 36336 Focal: Native Am. N = 4462				Reference: White N = 36336 Focal: Asian N = 1999			
	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag	MH $\chi^2$	$\Delta$ MH	SMD	Flag
	31	498.58	-0.92	-0.07	B<	85.16	-0.85	-0.07	B<	388.56	-0.92	-0.07	B<	75.57	-0.78	-0.06	B<	4.88	-0.30	-0.02
32	101.16	0.39	0.04	B>	64.80	0.71	0.06	B>	3.11	-0.08	-0.01	A	0.24	-0.05	-0.01	A	0.07	-0.03	0.00	A
33	53.78	-0.32	-0.02	B<	0.00	-0.01	0.00	A	54.64	-0.36	-0.02	B<	4.89	0.20	0.02	A	3.27	0.27	0.02	A
34	0.12	0.02	0.00	A	9.82	-0.29	-0.02	B<	2.07	0.07	0.01	A	154.20	1.16	0.10	B>	0.44	-0.10	-0.01	A
35	1.00	0.04	0.00	A	43.55	0.67	0.05	B>	20.05	0.23	0.02	B>	17.73	0.39	0.03	B>	0.33	0.09	0.00	A
36	181.14	-0.57	-0.04	B<	10.53	-0.29	-0.02	B<	89.38	-0.45	-0.03	B<	16.36	-0.36	-0.03	B<	0.03	0.03	0.00	A
37	186.91	1.03	0.02	B>	0.58	0.12	0.00	A	106.50	0.91	0.03	B>	36.89	0.85	0.03	B>	0.01	0.05	0.00	A
38	24.61	-0.19	-0.02	B<	34.58	0.51	0.05	B>	136.43	0.53	0.04	B>	94.23	0.82	0.08	B>	21.91	0.60	0.05	B>
39	781.11	-1.16	-0.09	B<	35.78	-0.54	-0.04	B<	43.07	-0.31	-0.02	B<	376.26	1.75	0.15	C>	1.83	-0.20	-0.01	A
40	20.66	-0.18	-0.01	B<	13.01	-0.33	-0.03	B<	6.04	0.11	0.02	A	17.00	-0.36	-0.03	B<	4.51	0.29	0.02	A
41	30.56	0.34	0.01	B>	7.01	-0.34	-0.01	B<	1.04	-0.08	0.00	A	2.56	0.19	0.01	A	5.75	-0.55	-0.01	A
42	61.51	0.35	0.02	B>	0.00	-0.01	0.00	A	43.45	0.34	0.03	B>	0.03	0.02	0.00	A	0.89	-0.14	-0.01	A
43	12.94	0.16	0.01	B>	22.75	0.48	0.03	B>	30.44	0.28	0.02	B>	11.01	0.30	0.03	B>	22.92	0.78	0.04	B>
44	294.78	0.66	0.06	B>	76.00	0.78	0.07	B>	181.07	0.61	0.06	B>	81.33	0.79	0.07	B>	27.92	0.65	0.05	B>
45	6.83	-0.10	-0.01	B<	0.00	0.00	0.00	A	30.21	0.26	0.03	B>	5.47	-0.20	-0.02	A	5.20	0.30	0.02	A
46	23.22	0.20	0.02	B>	0.02	0.02	0.00	A	31.47	-0.28	-0.02	B<	12.98	-0.37	-0.02	B<	5.46	0.28	0.02	A
47	273.54	0.66	0.05	B>	4.11	-0.18	-0.02	A	98.34	-0.46	-0.04	B<	53.75	-0.62	-0.06	B<	0.26	0.07	0.00	A
48	40.16	0.23	0.02	B>	5.50	0.20	0.02	A	80.42	0.39	0.04	B>	17.10	0.34	0.03	B>	33.26	0.67	0.06	B>
49	128.18	0.47	0.04	B>	0.00	0.00	0.00	A	0.04	-0.01	0.00	A	4.61	0.19	0.02	A	0.24	-0.07	0.00	A
50	705.89	-1.14	-0.08	B<	43.12	-0.60	-0.05	B<	36.81	-0.30	-0.03	B<	7.04	-0.23	-0.02	B<	21.64	-0.66	-0.04	B<
51	333.39	0.68	0.06	B>	8.17	0.24	0.02	B>	8.35	0.13	0.02	B>	5.33	0.19	0.02	A	21.18	0.56	0.05	B>
52	85.81	0.39	0.03	B>	3.13	-0.16	-0.01	A	61.30	0.38	0.03	B>	6.89	0.23	0.02	B>	2.68	-0.23	-0.01	A
53	43.72	-0.27	-0.02	B<	19.47	0.40	0.03	B>	0.61	0.04	0.00	A	10.28	-0.29	-0.02	B<	4.91	0.30	0.02	A
54	36.19	0.30	0.02	B>	0.95	0.11	0.01	A	28.53	0.31	0.02	B>	7.93	0.28	0.02	B>	3.76	0.36	0.01	A

Note. African Am. = African American, Native Am.= Native American, MH  $\chi^2$ = Mantel-Haenszel Chi-Square,  $\Delta$ MH = Delta (MH-D DIF), SMD= Standardized Mean Difference, A= No DIF, B=Weak DIF, C=Strong DIF, < favors reference group, > favors focal group. Item number does not indicate test booklet location due to field test items.

**Table 9.2.1.16**  
**DIF Statistics for Items Exhibiting Strong DIF**

Content	Grade	Item #	Item Type	In Favor Of		MH	$\Delta$ MH	SMD
				/Against	Group			
Math	5	41	MC	In Favor of	Asian	56.36	1.51	0.05
Math	HS	26	MC	In Favor of	Native American	101.88	1.80	0.05
Reading	3	24	MC	In Favor of	Asian	61.77	1.56	0.05
Reading	3	32	MC	In Favor of	Native American	192.25	1.58	0.10
Reading	3	33	MC	Against	Hispanic	866.09	-1.51	-0.10
Reading	6	6	MC	Against	Native American	247.90	-1.65	-0.10
Reading	6	26	MC	Against	Hispanic	845.67	-1.65	-0.09
Reading	7	41	MC	In Favor of	Native American	389.72	2.01	0.14
Reading	8	20	MC	Against	Asian	148.09	-1.62	-0.10
Reading	HS	27	MC	Against	Female	2577.63	-2.20	-0.16
Reading	HS	39	MC	In Favor of	Native American	376.26	1.75	0.15

### 9.2.2 Correlations among AIMS Assessments

Correlations were examined between scale scores on 2007 Spring AIMS tests by grade level. Note that data used for the calculation of correlation included records with valid scale scores in all content areas and tests in each grade level. Sample sizes are therefore slightly lower than presented in other parts of this technical report.

In addition, because students in high school had different testing windows for the reading, writing and mathematics tests, data merging was necessary to match reading and writing records with mathematics records. Once valid records were selected for each of the high school content areas, and records with duplicate student identification numbers were removed, data was merged based on student identification number. Table 9.2.3.1 presents the resulting reduction in N size for each step of the merge. Scale score means and distributions prior to and after the merge were compared to ensure that the match did not substantially alter the data. Only slight increases in mean and decreases in standard deviation occurred after the merge, and density plots illustrated that the shape of the distribution prior to and after merging matched reasonably well. Therefore, correlations presented for the high school tests are based on the matched data, with a total N size of 65,791.

All correlations are presented in Tables 9.2.3.2 through 9.2.3.8. The patterns of correlation presented in the tables are consistent with expectations given the constructs measured. Correlations were consistently high between tests designed to measure the same or very similar constructs (i.e., CRT Math and NRT Math or CRT Reading and NRT Reading). Correlations were much lower between tests designed to measure dissimilar constructs such as Math and Writing. Correlations between CRT Writing with other tests are attenuated which might be due to lowered reliability of the writing test scores. Since appropriate measures of test reliability for the AIMS writing test scores can not be determined, the disattenuated correlations can not be computed.

**Table 9.2.3.1**  
**Matching Process for High School Test Correlations Calculations**

Content	N Total Valid	N Valid in Both Reading and Writing	N with Missing or Duplicate SAIS	N Valid Prior to Merge	N Valid All Content with Matched SAIS
Reading	74,071	72,457	306	72,151	65,791
Writing	73,812				
Math	71,315	NA	288	71,027	

**Table 9.2.3.2**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 3**

Test	N	1	2	3	4	5	6
1. RD CRT	79292	--	0.61	0.81	0.84	0.79	0.74
2. WR CRT	79292		--	0.56	0.58	0.59	0.53
3. MA CRT	79292			--	0.70	0.71	0.85
4. RD NRT	79292				--	0.73	0.65
5. LA NRT	79292					--	0.67
6. MA NRT	79292						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.3**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 4**

Test	N	1	2	3	4	5	6
1. RD CRT	78824	--	0.61	0.79	0.81	0.74	0.69
2. WR CRT	78824		--	0.57	0.57	0.59	0.52
3. MA CRT	78824			--	0.67	0.70	0.83
4. RD NRT	78824				--	0.68	0.60
5. LA NRT	78824					--	0.63
6. MA NRT	78824						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.4**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 5**

Test	N	1	2	3	4	5	6
1. RD CRT	79321	--	0.58	0.79	0.84	0.74	0.71
2. WR CRT	79321		--	0.54	0.53	0.53	0.50
3. MA CRT	79321			--	0.68	0.68	0.84
4. RD NRT	79321				--	0.67	0.63
5. LA NRT	79321					--	0.63
6. MA NRT	79321						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.5**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 6**

Test	N	1	2	3	4	5	6
1. RD CRT	78219	--	0.58	0.79	0.85	0.72	0.72
2. WR CRT	78219		--	0.54	0.56	0.52	0.52
3. MA CRT	78219			--	0.71	0.68	0.84
4. RD NRT	78219				--	0.66	0.67
5. LA NRT	78219					--	0.63
6. MA NRT	78219						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.6**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 7**

Test	N	1	2	3	4	5	6
1. RD CRT	78407	--	0.60	0.80	0.85	0.74	0.71
2. WR CRT	78407		--	0.58	0.57	0.57	0.55
3. MA CRT	78407			--	0.70	0.70	0.86
4. RD NRT	78407				--	0.67	0.64
5. LA NRT	78407					--	0.64
6. MA NRT	78407						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.7**  
**2007 Spring AIMS Correlations Among Tests**  
**Grade 8**

Test	N	1	2	3	4	5	6
1. RD CRT	77007	--	0.64	0.78	0.86	0.76	0.72
2. WR CRT	77007		--	0.59	0.61	0.60	0.57
3. MA CRT	77007			--	0.70	0.70	0.86
4. RD NRT	77007				--	0.70	0.65
5. LA NRT	77007					--	0.65
6. MA NRT	77007						--

Note. N size will be less than presented in other parts of this Technical Report due to missing or invalid test records in some but not all content areas.

**Table 9.2.3.8**  
**2007 Spring AIMS Correlations Among Tests**  
**High School**

Test	N	1	2	3
1. RD CRT	65791	--	0.69	0.77
2. WR CRT	65791		--	0.64
3. MA CRT	65791			--

Note. N size will be less than presented in other parts of this Technical Report due to 1) missing or invalid test records in some but not all content areas and 2) matching reading, writing and math records according to student identification number.

## Part 10: Classification

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Part 10 of this technical report provides information regarding classifying students into proficiency categories. The following AERA/APA/NCME standards are covered in this part: 1.5, 1.7, 2.14, 2.15, 4.9, 4.19, 4.20, 4.21, and 6.5.

Scores from the 2007 Spring AIMS assessments are used to classify students into one of four performance categories: Falls Far Below the Standard, Approaches the Standard, Meets the Standard, and Exceeds the Standard. This part of the technical report provides information regarding classifying students into these four performance categories. Arizona educators made recommendations for cut scores for each category in standard setting workshops facilitated by CTB. Analyses were conducted to examine the consistency and accuracy with which students were assigned to performance categories.

### 10.1 Standard Setting Technical Documentation

Standard setting for the AIMS CRT mathematics and reading tests was conducted in early May, 2005 using the Bookmark Standard Setting Procedure. All technical documentation regarding the standard setting is available in the Bookmark Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Standard setting for the AIMS CRT writing tests was also conducted in May, 2005. The Body of Work Standard Setting Procedure was used for this standard setting. Technical documentation is available in the Body of Work Standard Setting Technical Report, submitted by CTB/McGraw-Hill to the ADE in June 2005.

Final scale score ranges for each of the four performance level categories for the AIMS CRT tests are presented below in Table 10.1.1.

**Table 10.1.1**  
**2007 Spring AIMS**  
**Final Scale Score Ranges by Performance Level**

Test	FFBS	AS	MS	ES
<b>Mathematics</b>				
3	200-385	386-419	420-491	492-650
4	230-413	414-447	448-520	521-675
5	255-441	442-475	476-549	550-700
6	270-462	463-495	496-573	574-725
7	290-483	484-516	517-598	599-740
8	300-504	505-536	537-622	623-800
HS	500-667	668-682	683-749	750-900
<b>Reading</b>				
3	200-378	379-430	431-515	516-640
4	220-401	402-449	450-535	536-660
5	240-423	424-467	468-555	556-675
6	250-432	433-477	478-570	571-690
7	260-442	443-488	489-586	587-720
8	270-451	452-498	499-601	602-800
HS	500-626	627-673	674-772	773-900
<b>Writing</b>				
3	200-336	337-423	424-528	529-650
4	230-365	366-460	461-571	572-700
5	255-393	394-496	497-614	615-740
6	275-399	400-503	504-629	630-760
7	290-406	407-509	510-644	645-770
8	300-412	413-516	517-659	660-800
HS	500-609	610-677	678-753	754-900

Note. FFBS = Falls Far Below the Standard; AS = Approaches the Standard;  
 MS = Meets the Standard; ES = Exceeds the Standard.

## 10.2 Classification Consistency and Accuracy

This section describes the analyses conducted to estimate classification consistency and accuracy for the 2007 AIMS DPA and high school test administrations. Classification consistency can be defined as the agreement between examinees' performance category classification from two independent administrations of the same test (or two parallel forms of the test). Classification accuracy can be defined as the agreement between the actual classifications using observed cut scores and true classifications based on known true cut scores (Livingston & Lewis, 1995).

In conjunction with internal consistency, classification consistency is an important type of reliability and is particularly relevant to high stakes pass/fail tests such as the AIMS high school tests. As a form of reliability, classification consistency represents how reliably students can be classified into performance categories. Please see Part 9 of this report for more information on the internal consistency of the AIMS assessments.

For tests such as the AIMS high school assessments, classification consistency is most important for students whose ability is near the pass/fail cut score. Students whose ability is far above or far below the value established for passing are unlikely to be misclassified because repeated administration of the test will nearly always result in the same classification. Examinees whose true scores are close to the cut score are a more serious concern. These students' true scores will likely lie within the standard error of measurement of the cut score. For this reason, the measurement error at

the cut scores should be considered when evaluating the classification consistency of a test. For convenience, the cut scores and their associated standard errors are presented in Table 10.2.3.1. Furthermore, the number of students near the cut scores should also be considered when evaluating classification consistency; these numbers show the number of students who are most likely to be misclassified. The number of students near the cut scores for each grade and content area can be found in the state scale score frequency distributions presented in Part 8 of this report.

Classification consistency and accuracy were estimated using the IRT procedure suggested by Lee, Hanson, and Brennan (2002) and Wang, Kolen and Harris (2000) for the AIMS assessments in Reading and Mathematics. For the AIMS Writing assessment, procedures described by Livingston and Lewis (1995) were used to estimate classification consistency and accuracy. The following description of classification consistency and accuracy is based on the paper by Lee et al. (2002).

### **10.2.1 Classification Consistency**

Assume that  $\theta$  is a single latent trait measured by a test and denote  $\Phi$  as a latent random variable. When a test  $X$  consists of  $K$  items and its maximum number-correct score is  $N$ , the marginal probability of the number-correct (NC) score  $x$  is

$$P(X = x) = \int P(X = x | \Phi = \theta)g(\theta)d\theta, \quad x = 0, 1, \dots, N.$$

where  $g(\theta)$  is the density of  $\theta$ .

In this report, the marginal distribution  $P(X = x)$  is denoted as  $f(x)$ , and the conditional error distribution  $P(X = x | \Phi = \theta)$  is denoted as  $f(x | \theta)$ . It is assumed that examinees are classified into one of  $H$  mutually exclusive categories on the basis of predetermined  $H-1$  observed score cutoffs,  $C_1, C_2, \dots, C_{H-1}$ . Let  $L_h$  represent the  $h^{\text{th}}$  category into which examinees with  $C_{h-1} \leq X \leq C_h$  are classified.  $C_0 = 0$  and  $C_H = \text{the maximum number-correct score}$ . Then, the conditional and marginal probabilities of each category classification are as follows:

$$P(X \in L_h | \theta) = \sum_{x=C_{h-1}}^{C_h} f(x | \theta), \quad h = 1, 2, \dots, H.$$

$$P(X \in L_h) = \int \sum_{x=C_{h-1}}^{C_h} f(x | \theta)g(\theta)d\theta, \quad h = 1, 2, \dots, H.$$

Because obtaining test scores from two independent administrations of AIMS was not feasible due to security, logistic, and cost constraints, a psychometric model was used to obtain the estimated classification consistency indices using test scores from a single administration. Based on the psychometric model, a symmetric  $H \times H$  contingency table can be constructed. The elements of  $H \times H$  contingency table consist of the joint probabilities of the row and column observed category classifications.

That two administrations are independent implies that if  $X_1$  and  $X_2$  represent the raw score random variables on the two administrations, then, conditioned on  $\theta$ ,  $X_1$  and  $X_2$  are independent and identically distributed. Consequently, the conditional bivariate distribution of  $X_1$  and  $X_2$  is

$$f(x_1, x_2 | \theta) = f(x_1 | \theta)f(x_2 | \theta).$$

The marginal bivariate distribution of  $X_1$  and  $X_2$  can be expressed as follows:

$$f(x_1, x_2) = \int f(x_1, x_2 | \theta)f(\theta)d\theta.$$

Consistent classification means that both  $X_1$  and  $X_2$  fall in the same category. The conditional probability of falling in the same category on the two administrations is

$$P(X_1 \in L_h, X_2 \in L_h | \theta) = \left[ \sum_{x_1=C_{h-1}}^{C_{h-1}} f(x_1 | \theta) \right]^2, \quad h = 1, 2, \dots, H.$$

The agreement index  $P$ , conditional on theta, is obtained by

$$P(\theta) = \sum_{h=1}^H P(X_1 \in L_h, X_2 \in L_h | \theta).$$

The agreement index (classification consistency) can be computed as

$$P = \int P(\theta)g(\theta)d(\theta).$$

The probability of consistent classification by chance,  $P_C$ , is the sum of squared marginal probabilities of each category classification.

$$P_C = \sum_{h=1}^H P(X_1 \in L_h)P(X_2 \in L_h) = \sum_{h=1}^H [P(X_1 \in L_h)]^2.$$

Then, the coefficient kappa (Cohen, 1960) is

$$k = \frac{P - P_C}{1 - P_C}$$

### 10.2.2 Classification Accuracy

Let  $\Gamma_w$  denote true category. When an examinee has an observed score,  $x \in L_h$  ( $h = 1, 2, \dots, H$ ), and a latent score,  $\theta \in \Gamma_w$  ( $w = 1, 2, \dots, H$ ), an accurate classification is made when  $h = w$ . The conditional probability of accurate classification is

$$\gamma(\theta) = P(X \in L_w | \theta),$$

where  $w$  is the category such that  $\theta \in \Gamma_w$ .

### **10.2.3 Classification Consistency and Accuracy Results**

As mentioned above, for convenience, the cut scores and their associated standard errors are presented in table 10.2.3.1. Table 10.2.3.2 presents results from the classification consistency and classification accuracy analyses. These results are for classifying students into four performance levels. Included in the table for each grade and content area are case counts (N), classification consistency (Agreement), classification inconsistency (Inconsistency), probability of consistent classification by chance (Chance), Cohen's Kappa (Kappa), and classification accuracy (Accuracy). Inconsistency is defined as 1-agreement.

The 2007 AIMS classification consistency and accuracy results are consistent with classification analyses from the previous AIMS administration. It is important to note that the classification results are dependent on the number of cut scores maintained in a testing program. Moreover, the acceptability of the classification results should be evaluated with respect to the associated stakes of the testing program. The results for the AIMS assessments are quite consistent with other testing programs with similar structure and purpose.

**Table 10.2.3.1**  
**2007 Spring AIMS**  
**Standard Error of Measurement at Cut Scores**

Test	AS		MS		ES	
	Cut Score	SEM	Cut Score	SEM	Cut Score	SEM
<b>Mathematics</b>						
3	386	11	420	11	492	15
4	414	12	448	12	521	16
5	442	11	476	11	550	16
6	463	12	496	12	574	18
7	484	11	517	12	599	18
8	505	13	537	13	623	19
HS	668	8	683	8	750	12
<b>Reading</b>						
3	379	13	431	12	516	19
4	402	11	450	11	536	22
5	424	12	468	12	556	20
6	433	12	478	12	571	21
7	443	13	489	13	587	22
8	452	15	499	14	602	24
HS	627	13	674	13	773	21
<b>Writing</b>						
3	337	14	424	16	529	13
4	366	15	461	15	572	14
5	394	17	497	16	615	14
6	400	17	504	17	630	15
7	407	17	510	17	645	12
8	413	18	517	19	660	13
HS	610	9	678	9	754	8

Note. FFBS = Falls Far Below the Standard; AS = Approaches the Standard;  
 MS = Meets the Standard; ES = Exceeds the Standard.

**Table 10.2.3.2**  
**2007 Spring AIMS Reading and Mathematics**  
**Classification Consistency and Accuracy**

Test	N	Agreement	Inconsistency	Chance	Kappa	Accuracy
<b>Mathematics</b>						
3	80072	0.80	0.20	0.35	0.69	0.86
4	79500	0.79	0.21	0.32	0.69	0.85
5	79991	0.80	0.20	0.33	0.70	0.86
6	78793	0.79	0.21	0.30	0.70	0.85
7	78944	0.80	0.20	0.33	0.70	0.86
8	77527	0.78	0.22	0.31	0.68	0.85
HS	95557	0.80	0.20	0.33	0.71	0.86
<b>Reading</b>						
3	79774	0.80	0.20	0.39	0.67	0.86
4	79270	0.80	0.20	0.36	0.68	0.86
5	79821	0.80	0.20	0.43	0.65	0.86
6	78842	0.80	0.20	0.40	0.67	0.86
7	79246	0.80	0.20	0.39	0.66	0.86
8	77849	0.79	0.21	0.38	0.65	0.85
HS	93192	0.80	0.20	0.40	0.66	0.86
<b>Writing</b>						
3	80027	0.77	0.23	0.51	0.53	0.81
4	79541	0.83	0.17	0.55	0.62	0.85
5	80024	0.87	0.13	0.51	0.73	0.90
6	78909	0.89	0.11	0.61	0.72	0.91
7	79374	0.88	0.12	0.63	0.67	0.91
8	77969	0.90	0.10	0.58	0.77	0.93
HS-A	87480	0.83	0.17	0.44	0.69	0.86
HS-T	3457	0.87	0.13	0.37	0.80	0.90

Note. High school results include students in all cohorts. Results for reading and mathematics were computed with the IRT method suggested by Lee, Hanson and Brennan (2002) and Wang, Kolen, and Harris (2000). Results for writing were computed using the Livingston-Lewis procedure (1995), implemented with BB-CLASS (Brennan, 2004).

## References

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- Allen, M. J., & Yen, W. M. (1979). *Introduction to measurement theory*. Monterey, CA: Brooks/Cole.
- American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- Angoff, W. (1993). Perspectives on differential item functioning methodology. In P.W. Holland and H. Warner (Eds.), *Differential Item Functioning* (pp. 3-24). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Arizona Department of Education. (2005). *Body of Work Standard Setting Technical Report for Grades 3,5,8 and High School Writing*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Bookmark Standard Setting Technical Report for Grades 3,5,8, and High School Reading and Mathematics*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Test Administration Directions*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2006). *Test Administration Directions*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2005). *Test Coordinator's Manual*. Monterey, CA: CTB/McGraw-Hill.
- Arizona Department of Education. (2006). *Test Coordinator's Manual*. Monterey, CA: CTB/McGraw-Hill.
- Brennan, R.L. (2004). BB-CLASS: A computer program that uses the beta-binomial model for classification consistency and accuracy [Computer program]. Iowa City, IA: The University of Iowa Center for Advanced Studies in Measurement and Assessment.
- Brennan, R. L., & Prediger, D. J. (1981). Coefficient kappa: some uses, misuses, and alternatives. *Educational and Psychological Measurement*, 41, 687-699.
- Burket, G. R. (1991). PARDUX [Computer program]. Unpublished.
- Camilli, G., & Shepard, L. A. (1994). *Methods for identifying biased test items*. Newbury Park, CA: Sage.
- Choi, S. (2005). CalcSEM\_Rasch.sas [Computer program]. Unpublished.
- Clauser, B. E. & Mazor, K.M. (1998). Using statistical procedures to identify differentially functioning test items. *Educational Measurement: Issues and practice*, 17, 31-44.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.
- Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory*. Belmont, CA: Wadsworth Group/Thompson Learning.
- CTB/McGraw-Hill. (2001). *TerraNova, The Second Edition, California Achievement Tests®*. Monterey, CA: Author.
- CTB/McGraw-Hill. (2001). *TerraNova, The Second Edition, Norms Book*. Monterey, CA: Author.
- CTB/McGraw-Hill. (2003). *TerraNova®, The Second Edition: California Achievement Tests® Technical Report*. Monterey, CA: Author.
- Green, D.R. (1975, December). *Procedures for assessing bias in achievement tests*. Presented at the National Institute of Education Conference on Test Bias, Annapolis, MD.

- Holland, P. W. & Thayer, D. T. (1988). Differential item performance and the Mantel-Haenszel procedure. In H. Wainer & H. I. Braun (Eds.), *Test validity* (pp. 129-145). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lee, W., Hanson, B. A., Brennan, R. L. (2002). Estimating consistency and accuracy indices for multiple classifications. *Applied Psychological Measurement*, 26, 412-432.
- Linacre, J. M. (2002). What do infit and outfit, mean-square and standardized mean? *Rasch Measurement Transactions*, 16(2), 878.
- Linacre, J. M. (2005). WINSTEPS Rasch measurement [Computer software]. Chicago: Winsteps.com.
- Livingston, S. A., & Lewis, C. (1995). Estimating the consistency and accuracy of classification consistency and accuracy based on test scores. *Journal of Educational Measurement*, 32, 179-197.
- Lord, F. M. (1980). *Applications of item response theory to practical testing programs*. Hillsdale, NJ: Lawrence Erlbaum.
- Lord, F. M., & Novick, M. R. (1968). *Statistical theories of mental test scores*. Reading MA: Addison-Wesley.
- Rasch, G. (1960). *Probabilistic models for some intelligence and attainment tests*. Copenhagen, Denmark: Danmarks Paedagogiske Institut.
- Shrout, P. E., & Fleiss, J. L. (1979). *Intraclass correlations: uses in assessing rater reliability*. *Psychological Bulletin*, 86(2), 420-428.
- Wang, T. W., Kolen, M. J., Harris, D. J. (2000). Psychometric properties of scale scores and performance levels for performance assessments using polytomous IRT. *Journal of Educational Measurement*, 37, 141-162.
- Wright, B.D. (1977). Solving measurement problems with the Rasch model. *Journal of Educational Measurement*, 14(2), 97-116.
- Wright, B. D., & Linacre, J. M. (1992). *BIGSTEPS Rasch Analysis* [Computer software]. Chicago, IL: MESA Press.
- Wright, B. D. & Linacre, J.M. (1994). Reasonable mean-square fit values. *Rasch Measurement Transactions*, 8, 370.
- Wright, B. D., & Masters, G. N., (1982). *Rating scale analysis: Rasch Measurement*. Chicago: MESA Press.
- Yen, W. M. (1984). Obtaining maximum likelihood trait estimates from number-correct scores for the three-parameter logistic model. *Journal of Educational Measurement*, 21, 93-111.
- Yen, W. M. & Burkett, G. R. (1997). Comparison of item response theory and Thurstone methods of vertical scaling. *Journal of Educational Measurement*, 34(4), 293-313.
- Zieky, M. (1993). Practical questions in the use of DIF statistics in test development. In Holland, P.W. & Wainer, H. (Eds.) *Differential Item Functioning* (pp. 337-348). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zwick, R., Donoghue, J. R., & Grima, A. (1993). Assessment of differential item functioning for performance tasks. *Journal of Educational Measurement*, 26, 44-66.

## **APPENDIX A** **Fall 2006 AIMS Administration**

### **Overview:**

The 2006 Fall AIMS assessments were administered in reading, writing and mathematics to students in high school who were in grades 11 and 12 and had not yet obtained a passing score on one of the content areas. These assessments were written to the Arizona content standards and were designed to measure student performance with respect to these standards. The 2006 Fall AIMS assessments in reading and mathematics were multiple-choice, criterion-referenced tests. The 2006 Fall AIMS writing assessment consisted of a single extended response essay prompt.

### **Test Design, Development, and Administration:**

The design and development of the 2006 Fall AIMS assessments reflect the same guiding principals that were followed for the 2005 Spring AIMS assessments. Arizona teachers, curriculum specialists and administrators from across the state were an integral part of the AIMS test development process. More information regarding the committee meetings, the test blueprints, and the test development process is contained in Parts 3 and 4 of this technical report.

The test design and structure of the 2006 Fall AIMS assessment mirrored the structure of the AIMS assessments administered in spring. That is, the reading test consisted of 54 multiple choice items developed by Arizona teachers. Raw scores range from 0-54 and scale scores range from 500 to 900. Similarly, the mathematics test consisted of 85 multiple choice items developed by Arizona teachers. Raw scores range from 0-85 and scale scores range from 500 to 900. Finally, the AIMS writing assessment consisted of one extended response writing prompt. Responses to the prompt were scored on the 6-trait analytic rubric. Each trait received two ratings. Final scores for traits with adjacent ratings were derived by averaging the two ratings. The raw scores ranged from 0-36 and scale scores were designed to range from 500 to 900. There are no norm-referenced items included in the high school AIMS assessments.

The test selection process for the 2006 Fall AIMS was designed such that resulting tests matched the 2005 Spring AIMS in overall test difficulty and content coverage. The test selection process is described in Part 4 of this report.

Test administration procedures for the Fall 2006 AIMS are described in Part 5 of this report.

### **Scaling and Equating:**

The 2006 Fall AIMS administration was designed for students who were retaking the assessment because they had not obtained a passing score on one of the content areas. The population of students that retake the AIMS assessments varies from administration to administration in terms of its composition and achievement. Moreover, expediency in the reporting of results to the population of students who are retaking the AIMS assessments was considered to be a priority. For these reasons, a pre-equating model was adopted for the Fall AIMS administration.

Pre-equating takes advantage of an existing bank of previously calibrated and scaled items such that an equated form and an associated number correct to scale score conversion table can be constructed prior to operational administration. The Fall 2006 assessment was constructed from

items that had been previously administered in the 2006 Spring AIMS administration and had been calibrated and linked to the operational scale of measurement using the Rasch measurement model. Using the existing item parameters for the items selected to be on 2006 Fall AIMS assessment, the number correct to AIMS scale score conversion tables were created. The raw score to scale score conversions, including the standard error of measurement (SEM) for each scaled score, are presented in Tables A.1 through A.3.

### **2006 Fall AIMS Test Results:**

The results of the 2006 Fall AIMS are reported in Tables A.4 through A.6. Results presented below are based on population data contained within the final electronic data files. The results presented in this part of the technical report may differ slightly from final testing results presented on the Arizona Department of Education website due to slight differences in the application of exclusion rules. Official final results typically use more detailed school-level information than is used to conduct research analyses. The results in the following tables are presented as evidence of reliability and validity of the AIMS assessments and should not be used for state accountability purposes.

Results for AIMS high school assessments are reported by graduating cohort. Cohort 08 is defined as the group of students that will be graduating in 2008, and typically includes 11<sup>th</sup> grade students. Cohort 07 is defined as the group of students that will be graduating in 2007, and is typically comprised of seniors. Cohort 06 is defined as the group of students that were expected to have graduated in 2006 or prior. For each cohort, scale score means and standard deviations as well as the percentages of students in each performance level are presented for the state as a whole and disaggregated into various demographic groups. Disaggregated results were produced for the various groups by using demographic data on student answer documents.

**Table A.1**  
**2006 Fall AIMS Raw Score to Scale Score Table**  
**Mathematics CRT High School**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	35	43	671	8
1	501	35	44	673	8
2	526	25	45	675	8
3	541	21	46	677	8
4	552	18	47	679	8
5	561	17	48	681	8
6	568	15	49	683	8
7	575	14	50	685	8
8	580	14	51	687	8
9	585	13	52	688	8
10	590	12	53	690	8
11	594	12	54	692	8
12	598	11	55	694	8
13	602	11	56	696	8
14	605	11	57	698	8
15	609	11	58	701	8
16	612	10	59	703	9
17	615	10	60	705	9
18	618	10	61	707	9
19	621	10	62	709	9
20	623	9	63	712	9
21	626	9	64	714	9
22	628	9	65	716	9
23	631	9	66	719	9
24	633	9	67	721	10
25	635	9	68	724	10
26	638	9	69	727	10
27	640	9	70	730	10
28	642	9	71	733	10
29	644	9	72	736	11
30	646	8	73	740	11
31	648	8	74	743	11
32	650	8	75	747	12
33	652	8	76	752	12
34	654	8	77	756	13
35	656	8	78	762	14
36	658	8	79	768	15
37	660	8	80	775	16
38	662	8	81	783	18
39	664	8	82	793	20
40	666	8	83	808	25
41	668	8	84	832	35
42	670	8	85	900	91

Note. SEM is the standard error of measurement for the scale score. High school mathematics scale scores are not on the same vertical scale as grades 3-8.

**Table A.2**  
**2006 Fall AIMS Raw Score to Scale Score Table**  
**Reading CRT High School**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	36	27	665	13
1	500	36	28	669	13
2	513	31	29	673	13
3	532	26	30	677	13
4	546	23	31	680	13
5	557	21	32	684	13
6	566	19	33	688	13
7	574	18	34	692	13
8	581	17	35	696	13
9	588	16	36	700	13
10	594	16	37	704	14
11	599	15	38	709	14
12	604	15	39	713	14
13	609	14	40	718	14
14	614	14	41	723	15
15	619	14	42	728	15
16	623	14	43	734	16
17	627	13	44	740	16
18	631	13	45	746	17
19	635	13	46	754	18
20	639	13	47	762	19
21	643	13	48	771	21
22	647	13	49	782	23
23	651	13	50	796	26
24	654	13	51	815	31
25	658	13	52	846	44
26	662	13	53	900	80

Note. SEM is the standard error of measurement for the scale score. High school reading scale scores are not on the same vertical scale as grades 3-8.

**Table A.3**  
**2006 Fall AIMS Raw Score to Scale Score Table**  
**Writing CRT High School**

Raw Score	Scale Score	SEM	Raw Score	Scale Score	SEM
0	500	31	18.5	659	10
0.5	500	31	19	664	9
1	500	31	19.5	670	9
1.5	500	31	20	675	9
2	500	31	20.5	680	9
2.5	500	31	21	684	9
3	500	31	21.5	689	9
3.5	500	31	22	694	9
4	500	31	22.5	700	10
4.5	500	31	23	705	10
5	500	31	23.5	712	10
5.5	500	31	24	718	10
6	500	31	24.5	725	10
6.5	519	18	25	731	10
7	537	12	25.5	737	9
7.5	544	10	26	742	9
8	551	9	26.5	747	8
8.5	556	9	27	751	8
9	561	9	27.5	755	8
9.5	566	9	28	759	8
10	571	9	28.5	763	8
10.5	576	9	29	767	8
11	581	9	29.5	772	8
11.5	586	9	30	776	8
12	591	9	30.5	780	8
12.5	597	9	31	784	8
13	602	9	31.5	789	8
13.5	607	9	32	793	8
14	612	9	32.5	798	8
14.5	617	9	33	802	9
15	621	9	33.5	807	9
15.5	626	9	34	812	10
16	630	9	34.5	820	11
16.5	636	9	35	827	13
17	641	10	35.5	864	36
17.5	647	10	36	900	111
18	653	10			

Note. SEM is the standard error of measurement for the scale score. High school writing scale scores are not on the same vertical scale as grades 3-8.

**Table A.4**  
**2006 Fall AIMS Results**  
**Mathematics CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 08</b>							
Total	21417	672.68	26.32	42	25	32	1
Ethnic Background							
White (Not Hispanic)	6727	679.63	29.74	33	23	41	3
Black or African American	1642	668.72	24.58	46	24	30	0
Hispanic or Latino	10586	669.38	23.31	47	26	27	1
American Indian or Alaskan Native	1974	667.17	22.29	50	25	25	0
Asian or Pacific Islander	355	689.22	34.36	27	20	46	7
Special Program Membership							
Title 1	1812	666.66	23.21	52	25	23	0
English Learner Program	1199	662.61	22.84	61	21	18	0
Special Education	1280	651.13	22.01	78	13	8	0
<b>Cohort 07</b>							
Total	10269	670.46	26.10	47	25	27	1
Ethnic Background							
White (Not Hispanic)	2678	676.79	32.11	41	22	34	4
Black or African American	873	667.52	24.24	51	21	27	0
Hispanic or Latino	5264	668.13	22.67	48	26	25	0
American Indian or Alaskan Native	1222	666.82	21.11	50	28	22	0
Asian or Pacific Islander	164	686.24	37.95	30	23	40	7
Special Program Membership							
Title 1	994	665.98	22.60	54	22	24	0
English Learner Program	713	664.25	23.17	59	20	20	0
Special Education	823	649.88	20.36	82	11	6	0
<b>Cohort 06</b>							
Total	2570	663.48	22.24	57	24	18	0
Ethnic Background							
White (Not Hispanic)	441	668.66	25.87	47	25	28	0
Black or African American	155	660.20	24.68	59	23	17	0
Hispanic or Latino	1555	662.25	20.35	60	24	16	0
American Indian or Alaskan Native	338	662.84	21.21	59	23	18	0
Asian or Pacific Islander	52	666.75	29.71	54	21	25	0
Special Program Membership							
Title 1	356	661.04	21.32	61	24	14	0
English Learner Program	331	657.59	18.29	69	22	9	0
Special Education	207	644.42	17.90	89	7	3	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

**Table A.5**  
**2006 Fall AIMS Results**  
**Reading CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 08</b>							
Total	18100	668.87	37.17	11	48	41	1
Ethnic Background							
White (Not Hispanic)	5023	684.62	42.99	7	35	55	3
Black or African American	1289	664.30	36.45	15	46	39	0
Hispanic or Latino	9552	661.88	32.11	13	53	34	0
American Indian or Alaskan Native	1720	662.68	28.76	9	56	34	0
Asian or Pacific Islander	368	680.19	41.55	8	39	50	2
Special Program Membership							
Title 1	1613	662.06	33.18	14	53	33	0
English Learner Program	1394	644.32	27.86	25	62	13	0
Special Education	1499	646.31	31.58	27	55	18	0
<b>Cohort 07</b>							
Total	8629	664.64	38.18	13	52	33	1
Ethnic Background							
White (Not Hispanic)	1954	681.34	49.01	10	39	47	4
Black or African American	618	662.89	38.75	15	52	32	1
Hispanic or Latino	4769	658.32	31.51	14	57	28	0
American Indian or Alaskan Native	1041	660.18	29.87	13	57	30	0
Asian or Pacific Islander	199	683.07	44.89	11	36	52	2
Special Program Membership							
Title 1	859	657.75	32.88	15	58	27	0
English Learner Program	880	647.71	27.58	21	64	15	0
Special Education	892	640.77	29.46	31	57	12	0
<b>Cohort 06</b>							
Total	2049	657.15	35.40	17	54	28	0
Ethnic Background							
White (Not Hispanic)	339	672.96	43.26	14	39	46	1
Black or African American	146	652.50	41.55	26	48	26	0
Hispanic or Latino	1248	653.10	31.13	18	59	23	0
American Indian or Alaskan Native	256	658.06	33.28	14	57	29	0
Asian or Pacific Islander	42	652.67	34.98	21	50	29	0
Special Program Membership							
Title 1	314	654.28	34.22	17	58	25	0
English Learner Program	368	640.15	24.44	26	66	8	0
Special Education	215	639.33	33.90	31	55	13	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

**Table A.6**  
**2007 Fall AIMS Results**  
**Writing CRT High School**

	N	Scale Score		% at Performance Level			
		M	SD	FFBS	AS	MS	ES
<b>Cohort 08</b>							
Total	22702	680.77	41.78	5	35	58	2
Ethnic Background							
White (Not Hispanic)	8020	691.10	40.71	3	27	66	4
Black or African American	1450	679.08	45.05	6	33	59	2
Hispanic or Latino	11021	674.44	40.69	6	40	54	1
American Indian or Alaskan Native	1611	671.75	39.46	5	45	50	0
Asian or Pacific Islander	438	692.70	43.65	3	27	63	7
Special Program Membership							
Title 1	1814	673.86	42.11	6	38	54	1
English Learner Program	1397	644.21	48.56	18	57	24	0
Special Education	1634	646.48	45.26	16	59	24	0
<b>Cohort 07</b>							
Total	8961	672.13	44.25	7	43	47	2
Ethnic Background							
White (Not Hispanic)	2476	683.27	48.11	6	33	55	6
Black or African American	586	673.43	48.92	8	40	49	3
Hispanic or Latino	4696	666.16	40.22	8	49	43	1
American Indian or Alaskan Native	960	668.01	42.93	7	46	46	1
Asian or Pacific Islander	202	690.13	44.79	3	33	55	9
Special Program Membership							
Title 1	826	665.36	40.43	8	51	40	1
English Learner Program	866	649.91	42.48	15	57	28	0
Special Education	996	642.54	44.42	18	60	22	0
<b>Cohort 06</b>							
Total	2036	660.69	46.51	11	50	38	1
Ethnic Background							
White (Not Hispanic)	394	670.27	50.32	8	45	43	3
Black or African American	147	659.09	53.85	14	48	37	1
Hispanic or Latino	1220	656.40	43.95	13	52	35	0
American Indian or Alaskan Native	214	668.21	40.22	6	53	41	0
Asian or Pacific Islander	42	659.31	53.82	17	40	43	0
Special Program Membership							
Title 1	312	660.58	44.55	12	48	39	1
English Learner Program	375	636.91	45.39	22	58	20	0
Special Education	216	634.73	47.06	22	60	18	0

Note. FFBS= Falls Far Below the Standard; AS= Approaches the Standard; MS= Meets the Standard; ES= Exceeds the Standard. Students with no valid attempt, invalidation, off-grade, or a non-standard accommodation are not included in this summary. In addition, home-schooled students, students attending Bureau of Indian Affairs schools, students attending juvenile corrections centers, students attending state hospital schools, and students who already met expectations in a previous test administration are not included in this summary. These results are not final results and are presented here for purposes of addressing reliability and validity. These results should not be used for accountability purposes.

**APPENDIX B**  
**Item Writer Selection Criteria**

**ARIZONA DEPARTMENT OF EDUCATION**

**PROCEDURE FOR SELECTION OF EDUCATOR COMMITTEES**  
**ARIZONA ASSESSMENT SECTION**

Although our database has contained over 1000 educators, after performing an update searching for current information, there are approximately 600-700 educators remaining. The Assessment Section is always recruiting new teachers to serve on the committees, and have prevailed upon veteran teachers to become Ambassadors of the Assessment by encouraging their colleagues to apply.

Once Arizona educators are identified and entered into the database, the Assessment Section uses the following procedures for selecting membership for a committee:

- Identify the purpose/function of the committee
- Establish the date and time of the committee
- Determine the criteria for membership on the committee:
  - Content area of expertise
  - Grade level experience
  - Specific skill or knowledge expertise for committee function
  - Prior experience on ADE committees—a minimum 50% of each committee will have prior experience
  - Location of district/school
    - Rural/urban/suburban
    - Approximately 50% of committee members from Maricopa County when appropriate for purpose of committee
  - Ethnicity of school population or committee member
  - SES of school population
  - Number of committees served on recently—a committee member cannot serve on a series of committees used to develop items. Otherwise, they would be passing judgment on their own prior work. (This is a change in procedure)\*
- Review the database for educators that meet the criteria established
- Select committee members based on criteria for particular committee for primary and alternate list
- Invitations are sent to selected committee members on primary list \*\*
- After decline and accept emails are received by established deadline, additional invitations issued to members on alternate list
- Committee meeting held
- Review performance of participants

\* ADE is concerned that utilizing the same committee members on a series of committees will reduce the input from a variety of educators and have requested that past committee participation be part of the selection process. As the pool of teachers expands, individual members will serve on fewer committees.

\*\* It is not the policy to inform all members in our database of scheduled committee meetings, but only those invited to a particular meeting.

In April of 2006, all past participants were invited to reapply in order to update the database. The application identifies the demographics of each committee member: geographic location in Arizona, ethnicity of school/district population and/or committee participant, and a detailed biographical background including participation on AIMS committees. In order to replace past participants who have moved, changed positions, or no longer possess the time to serve, a recruitment letter was sent in October to solicit recommendations from District Superintendents regarding prospective Arizona educators whose expertise and participation could be of great benefit.

Recognition of existing AIMS committee participants is an important aspect of retaining our Ambassadors of the Assessment. Beginning with the Anchor Setting – Conventions Committee (September 16, 2006), participants received a letter recognizing their excellent contributions to the AIMS assessments and to all Arizona students. These Letters of Recognition were sent to the educators' school boards, superintendents, and principals. This practice is anticipated to continue throughout the life of the AIMS project.

**APPENDIX C**  
**Item Writing Workshop**

Following are the PowerPoint slides used during the AIMS Item Writing Workshop in March, 2006.



*The McGraw-Hill Companies*

# Item Writing Workshop

## AIMS 2006-07

March 15-17, 2006  
and  
March 22-24, 2006

## An Item Writing Activity



1

## CTB Reading Staff

**Toni Gibbs –** Development Supervisor and  
Grade 3 & 4 Facilitator

**Gale Weir –** Grade 5 & 6 Facilitator

**Mark Rathjen –** Grade 7 & 8 Facilitator

**Kellie Crain –** HS Facilitator



## CTB Math Staff

**Dan Dube –** Development Supervisor

**Lynn Fitch –** Grade 3 & 4 Facilitator

**Linda Chambers –** Grade 5 & 6 Facilitator

**Darren Schmidt –** Grade 7 & 8 Facilitator

**Mary Foster –** HS Facilitator



## CTB Science Staff

**Michael Frontz** – Development Supervisor  
and Grade 4 Facilitator

**Kris Paulsen-Hands** – Grade 8 Facilitator

**Randi Rieman-Johns** – HS Facilitator



## Welcome or Welcome Back!

### Requirements:

- Content and assessment expertise
- Ability to be innovative
- Willingness to adhere to detailed item specifications
- Desire to be part of the AIMS development process

## Goal = to create the new field test items needed for Spring 2007

- **Reading committees** – will edit a few previously-written items associated with some unused passages, and will write approximately 15 new items for each new passage.
- **Math committees** – will edit and rewrite old items, and will write some new ones.
- **Science committees** – will write new sets of items associated with previously-reviewed and accepted stimuli, and will write new stand-alone items.

## Specifics – Reading

	Total Passages Available	Total Items Needed	Existing Passages	Existing Items to Edit	New Passages	New Items to Write
Grade 3	7	105	2	40	5	65
Grade 4	8	120	3	42	5	78
Grade 5	6	90	3	42	3	48
Grade 6	6	90	3	41	3	49
Grade 7	7	105	3	41	4	64
Grade 8	7	105	2	25	5	80
HS	17	255	4	55	13	200
TOTAL	58	870	20	286	38	584

## Specifics - Math

	Total Items Needed	Existing Items to Edit	New Items to Write
Grade 3	<b>60</b>	31	29 +
Grade 4	<b>60</b>	34	26 +
Grade 5	<b>60</b>	33	27 +
Grade 6	<b>60</b>	38	22 +
Grade 7	<b>60</b>	49	11 +
Grade 8	<b>60</b>	30	30 +
HS	<b>200</b>	200	0 +
<b>TOTAL</b>	<b>560</b>	415	145 +

## Specifics – Science

	Total Items Needed	Existing Items to Edit	New Items to Write
Grade 4	<b>315</b>	0	315
Grade 8	<b>370</b>	0	370
HS	<b>420</b>	0	420
<b>TOTAL</b>	<b>1105</b>	0	1105

## Teamwork and Resources

- Facilitators will provide tailored instruction and issue assignments to guide the work.
- One person will be assigned to check for proper coding of the items.
- Refer to item specs, content limits, word lists, DOKs, and checklists.
- Write items on scratch paper; consult with partner.
- Record items on templates and electronically.
- Use laptops/LCDs to share items with the group.
- Revise, edit, and rewrite.
- Improve your item at intervals throughout the workshop; share its progression at the end.





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## Security and Confidentiality Questions?

Thank you

**APPENDIX D**  
**Writing Pre-Equating Study**

Following is the AIMS Writing Assessment Pre-equating Study technical report, delivered to the Arizona Department of Education in February 2006.